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A

TREATISE

ON THE

NATURE AND TREATMENT

OF

SCROPHULA;

DESCRIBING ITS CONNECTION WITH DISEASES OF THE

SPINE, JOINTS, EYES, GLANDS,

&c. &c. &c.

FOUNDED ON AN ESSAY TO WHICH THE JACKSONIAN PRIZE, FOR THE YEAR 1818, WAS ADJUDGED BY THE ROYAL COLLEGE OF SURGEONS.

TO WHICH IS ADDED, A BRIEF ACCOUNT OF THE

Ophthalmia,

SO LONG PREVALENT IN CHRIST'S HOSPITAL.

By EUSEBIUS ARTHUR LLOYD,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN LONDON, SENIOR SURGEON TO THE GENERAL DISPENSARY, ALDERSGATE STREET, AND LATE HOUSE SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

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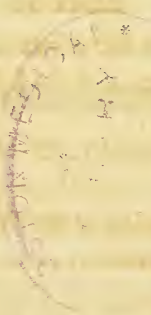

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TO

JOHN ABERNETHY, Esq. F.R.S.,

Surgeon to St. Bartholomew's Hospital, &c. &c.

Dear Sir,

The motives which influence an Author, in selecting the object of his Dedication are, I suppose, in general, these three: either the desire of expressing his gratitude publicly to some one who has treated him with kindness; or a wish to conciliate the Public by an apparent union between himself and the person to whom he dedicates his Work; or, lastly, a wish to maintain, by facts or arguments, a system which has already been established by another.

I am not ashamed, Sir, to own that I was actuated by all these motives when I requested your permission to inscribe these pages to you. Ever since my first entrance into St. Bartholomew's as your pupil, you have treated me with great and constant kindness, and have assisted me continually with your good opinion. Your own reputation is now established on so

firm a basis, that any connection with you must be advantageous to an individual first appearing before the Public; and one of the principal objects of my Book is to establish, in a single but important instance, the truth of those principles which you have so long maintained concerning the dependence of local diseases on general disorder of the system, and particularly on disorder of the digestive organs, and which have now forced their way through all the opposition of prejudice and old opinion, in a manner which marks at once their inherent excellence and truth.

If, in the pages which I now submit to you, or in the efforts of my future life, I should be able to contribute in any degree to the best interests of my profession, much must still be ascribed to you—whose example I shall ever be anxious to follow, not only in the pursuits of Science, but in that honest and manly integrity of character which distinguishes you among all who know you.

Believe me, my dear Sir,
Your much obliged and faithful servant,

E. A. LLOYD.

4, Falcon Square, June 19, 1821.

PREFACE.

The following pages are not laid before the public from an opinion that they comprise a full and complete Treatise on Scrophula, but from the hope that they may tend to establish a more rational and scientific mode of treating this prevalent and destructive disease; and that they may be found to contain some additional information on points which it is of the utmost importance accurately to understand.

The Author is not sufficiently sanguine to expect, that either the view which is here taken of the subject, or the treatment which is recommended, will be received without opposition. Complaints he doubts not will be raised about the simplicity of both; and he will be accused of an undistinguishing partiality towards a favorite

system, and of neglecting the particular nature and characters of the disease of which he treats.

To these objections he can only answer, that simplicity is not synonimous with uselessness; and that he is content to rest the ultimate establishment of his opinions on the truth and relevancy of the facts which he has produced. If he be accused farther of want of novelty, if it be said that the dependence of local disease on disorder of the digestive organs was already sufficiently known, it may be answered, that a proposition, though not new, may not have been sufficiently considered, or, what is of more consequence, practically may not have been sufficiently applied; and that no greater instance can be adduced of the importance of such application than that of scrophula, which is here given. So that here, as before, the appeal must be made to fact; and the only question will be, whether the cases which are adduced in the following Treatise were scrophulous, and whether they were cured by the simple process here described?

Yet, as the principles themselves on which the Author's treatment has been founded are gene-

rally known, he has not thought it necessary to demonstrate them at large. This has been done by others, and particularly by Mr. Abernethy; they are, therefore, only discussed in the present instance, so far as is necessary to make them understood by those *out* of the profession, who are not yet acquainted with them, or to point out their connection with the disease which is here considered.

Of the general or constitutional treatment, less also has been said than the subject might have admitted, or than may appear necessary to some persons. But it was not the wish of the Author to interfere any farther than his subject obliged him with the more immediate province of medicine. On the local treatment, he trusts that sufficient information has been given: but it must be remembered, that the great object of the Work is to shew, that scrophulous diseases are, in general, to be removed by attention to the general health of the patient; and that the disease itself is to be considered the secondary, not the primary object of attention.

Those who will still think that scrophula may

be cured by specifics applied indiscriminately to every case, must, if they will, adhere to their opinion; and so that it be not to the injury of their patients, they have the Author's full liberty to do so. For himself, he only claims the same liberty of practice, and hopes only for the same liberality of opinion.

He trusts, on the whole, that some information may be derived from the following pages, not only on the subject of scrophula itself, but of those diseases also which he has considered in connection with it—diseases which, in some or other of their forms, are the most frequent, and at the same time the most distressing affections of the human frame.

The Author has now only to add, his sincere and anxious hope, that in the reference which has been made to the opinions of others, nothing may have been said offensively or arrogantly; it has never been his intention to give offence; and he trusts, therefore, that none will be taken at the free expression of his opinion.

INTRODUCTION.

ERRATA.

PAGE 27, line 9, *for* " causes" *read* " cases."
39, line 39, *for* " digestions" *read* " dejections."
136, line 8, *for* " pædarthoraces" *read* " pædarthocaces."
144, line 29, *for* " neurosis" *read* " necrosis."
159, line 12, *for* " synoveal" *read* " synovial."
263, line 6, *for* " were before" *read* " was before."

who had written on this disease, to obtain many important facts that might be added to those with which my own practice had furnished me. But the scanty reference which I have been able to make to them, and the few facts with which they have supplied me, will sufficiently prove that in these expectations I have been disappointed. The disease, indeed, although, as I have said, it has been treated of generally by all systematic writers, has never yet been subjected to any particular

be cured by specifics applied indiscriminately to every case, must, if they will, adhere to their opinion; and so that it be not to the injury of their patients, they have the Author's full liberty to do so. For himself, he only claims the same liberty of practice, and hon-

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INTRODUCTION.

Although scrophula is a disease which was known to the earliest medical and surgical practitioners, and though it has been treated of by almost every systematic writer on these sciences, yet the information to be obtained from them is in no way equal to what the importance of the subject would have led one to expect. When I first entered on this inquiry, I was anxious, of course, to acquire information from every source, and hoped, from the ancient and modern authors who had written on this disease, to obtain many important facts that might be added to those with which my own practice had furnished me. But the scanty reference which I have been able to make to them, and the few facts with which they have supplied me, will sufficiently prove that in these expectations I have been disappointed. The disease, indeed, although, as I have said, it has been treated of generally by all systematic writers, has never yet been subjected to any particular

and scientific investigation, and much still remains to be done before it can be said to be thoroughly understood.

In my own examination of the subject, I have been guided entirely by facts, and have drawn no conclusion which those facts did not appear amply to warrant. I have had frequent opportunities of examining by dissection the morbid parts, when they have been separated from the body by operation, as well as the bodies of those who have fallen a victim to the disease. I have also had, for many years under my inspection, patients labouring under this disease in all its various forms, and in many cases have been so fortunate as to be able to trace them from their commencement to their termination.

I shall divide the subject into two parts. In the first part I shall treat of scrophula in general: of its characteristic signs, of its origin or causes; and lastly, of its treatment, or the means we should employ to remove that peculiar state of constitution, on which scrophula will be shewn mainly to depend.

In the second part I shall describe the *local* effects which this state of constitution produces, the particular changes which take place in different structures, and the local treatment it is necessary we should adopt.

PART I.

ON THE CHARACTER OR SYMPTOMS OF SCROPHULA.

In describing the symptoms indicating a scrophulous diathesis, all the authors with whom I am acquainted have fallen into the error of describing the state of a patient after the disease has given local evidence of its existence, instead of informing us of the temperament, or habit of body of the patient antecedent to this period; a circumstance which I cannot but consider as of the highest importance in our pathological research. Thus they enumerate among the symptoms of a scrophulous diathesis, or which only denote a tendency to scrophula, "a thickened chapped upper lip, the thickening extending to the alæ of the nose," "tumescence and redness of the tarsi, with weakness of the eyes in general," "tumid belly," and "enlargement of the lymphatic glands, particularly those of the neck." These, it is true, afford very decisive evidence of the existence of the disease, but should not be ranked among the symptoms indicating only a disposition

to it. All the other symptoms illustrative of the same point, which have been adduced, are either dubious or uncertain; as fair and shining skin, light hair and eyes; females being more subject to it than males, or males than females; both of these contradictory positions having their respective advocates. Among the advocates of the former, I will mention Mr. Samuel Cooper; among those of the latter, Dr. Cullen, in his First Lines of the Practice of Physic. I must not, however, be understood to speak of the symptoms just enumerated, as symptoms of no importance; far from it, I consider that they may sometimes be of the greatest assistance to us in the formation of our prognosis, when the disease attacks more important parts; and all I contend for is, that they should be noticed in their proper place.

It is always important to acquaint ourselves with the nature of a disease in its first and earliest stage; to anticipate its march; and to prevent it, by every possible means, from obtaining a "local habitation" in the body of any individual.

Scrophula is a disease so insidious in its approach, so gradual in its progress, and occurring in such a variety of constitutions, by which it must necessarily be modified, that we cannot wonder at the very vague definitions which different nosologists and systematic writers have given of it. Indeed, it is not only influenced by these causes; its appearances are also influenced by the

structure of the part affected by it: thus, the effects it produces in the lungs are different in many respects from those it produces in the bones, and it is only by a particular description of the disease, as it affects dissimilar structures, which will be treated of in another part of this Essay, that a correct knowledge of it can be communicated or acquired. I shall, therefore, according to the plan laid down, avoid any particular description in this part, and confine myself to a general account of the disease, and of those external symptoms upon which our professional opinion must be formed.

Scrophula oftener affects children than persons of any other age, though no age is altogether exempt from it. It appears, however, that the susceptibility which different parts have to it is altered by age; thus in children the upper lip, eyes, glands of the neck, and those of the mesentery, are generally the parts first affected; the lungs, bones, and other parts being subsequently attacked. It happens sometimes too in children, that small lumps form under the skin in various parts of the body, which suppurate, ulcerate, and pursue the same course with scrophulous abscesses in general. These we consider as scrophulous, from the nature of the matter they contain, and from their co-existing with other affections evidently of this description, and from other circum-

stances which will be mentioned in their proper place.

A species of warts also often forms about the face and neck of children of a scrophulous habit, but seldom in adults. In more advanced age the eyes, upper lip, and lymphatic glands are comparatively seldom affected; while the lungs, the other viscera, and the spongy parts of the bones are frequently. That, however, in adult age the lymphatic glands, upper lip, and eyes, may be affected with scrophula must be admitted, and that children may have a scrophulous affection of the bones, or of the lungs, without having previously had a similar affection of any other part, is equally true; but I am convinced that the preceding description will be found to be generally correct.

In the formation of our prognosis, the occurrence of this disease in more parts than one at the same time, materially assists us; but the peculiar appearance of the patient, or, if I may use the term, the physiognomonic signs, will, to the experienced and observant eye, be the most certain and unerring guide.

The appearance of the countenance is really that of delicacy and langour; though to the common observer, from the fulness, the peculiar smoothness, and beautiful colour of the cheeks, it is often that of the highest and most complete health. If, however, it be attentively observed, it

will be found that the cheeks, though full and tumid, are softer and more flaccid than is natural to health; and that, instead of being fixed and firm, they hang as it were loose on the face. There are, nevertheless, persons who have the greatest tendency to scrophula in whom none of these apparent signs of health exist, but whose complexions are peculiarly dull and pallid; in these the appearance of delicacy and langour is even greater than in the former. In the former state the lips generally partake of the fulness of the face, and are of a beautiful red, while in the latter they are pale. It often happens too, that the parts about the mouth are of a peculiar dull pallid hue. There is also a remarkable appearance about the eyes, which cannot be accurately described; but the conjunctiva is particularly free from blood-vessels, the pupil is generally much dilated, and the upper eyelid drops more than natural, to which, perhaps, as well as to the delicate state of habit, the dilatation of the pupil may be in some measure owing.

Among the symptoms indicating a disposition to scrophula, it has been already observed, that a fair complexion, and light hair and eyes are generally mentioned; but I believe there are no legitimate grounds for such distinction. Indeed, I am fully convinced, from a very extensive investigation of the subject, that persons of every variety

of complexion are alike subject to this disease; and that it is only necessary to place them in circumstances favourable to its developement, to have it fully established.

With reference to this subject, Mr. White, in his Treatise on Scrophula, maintains, that the majority of children in this country have light hair and eyes, and fair complexions; and therefore, that these cannot be considered as marks of a predisposition to scrophula. In this, however, I believe he is mistaken; at least, with respect to the first point, my experience leads me to a different conclusion. I should be more inclined to say, that three-fourths of the children in this country have not what any impartial person would call fair complexions, and light hair and eyes. Such, at least, I have ascertained to be the case in some of the largest charity-schools in London, particularly at Christ's Hospital, where several hundred children are indiscriminately collected from different parts of the country. Here too, out of a large number of children whom I have examined with some form or other of this disease, seven only had what could be fairly called light hair and eyes, and fair complexions; and if I considered these points of primary importance, I might adduce many more of the same kind. I have cases now before me of large families, consisting of twelve and thirteen children each, in which the disease

has distributed itself without any distinction among those of a dark and light complexion: in one family the dark-complexioned only have been attacked; in another, the fair; in a third, both. But it can hadly be necessary, as every surgeon's practice must have furnished him with instances of scrophula occurring in complexions of every variety of tint, from the fairest European to the darkest Ethiopian; and as every impartial judge, who will be content to take experience for his guide, must come to the same conclusion with myself, that the natural complexion, whether dark or fair, cannot be regarded as a diagnostic mark of a predisposition to scrophula.

CAUSES OF THE DISEASE.

Every day's experience more thoroughly convinces me that those local diseases, called scrophulous, arise from something wrong in the general health, sometimes co-existent with birth, and at other times entirely produced by improper attention to diet, to the alimentary viscera, and other occasional or accidental causes; and that they are not to be considered as dependant on disease of any particular system as the lymphatic, or always upon an hereditary or congenital imperfection, or peculiarity, of any particular part, or of the whole body. Thus, then, I consider that certain derangement of the vital functions, capable of being produced by a variety of causes, may effect such an alteration in the natural actions of a part, as to impair its functions, and give rise to that change of structure which we term a scrophulous disease. That disorder of any of the vital functions, particularly of the digestive organs, is capable of deranging the whole system, will be readily admitted; but as it is not so frequently insisted on, that the

same cause can exert an equal influence locally, or on a particular part, I shall state the following facts to prove it:—

A poor man was brought into St. Bartholomew's Hospital with a compound fracture of his leg, produced by the kick of a horse; the tibia protruded, and the parts around were much bruised, and sloughed away to a considerable extent, but the chasm became filled up with healthy granulations, and at the end of a fortnight the man was in particularly good health, free from all fever, or any species of irritation. At this time, which was on a Sunday, his friends, who lived in the country, came to see him, and brought him a large plum pudding, and other substantial provision, of which he ate most heartily, and in the evening was quite sick. During the night a high degree of fever came on, and towards morning he became delirious. Upon examining the wound to dress it, which was before perfectly healthy, its edges were found in a state of mortification, the granulations were all absorbed, and the tibia was exposed; so remarkable was the change which had been produced in the state of the wound, by this accidental derangement of the digestive organs, in the short space of twelve hours. On the following evening the wound was surrounded with erysipelatous inflammation, which, on the next day, was spreading so rapidly that the limb was obliged to be amputated: this, however,

had no effect in stopping the constitutional disorder, as the man died about eighteen hours after the operation.

A poor girl, a patient in St. Bartholomew's Hospital, who had met with a most extensive burn, and who was going on exceedingly well, and the wounds rapidly healing, ate something which disagreed with her, so that her stomach rejected every thing, and her bowels were continually purged; after which, the whole surface of the burnt parts, that was before perfectly healthy, mortified, putting on a most horrible appearance, and fever and delirium came on; and it was not until the disorder of the stomach and bowels was removed, that the burnt parts showed any disposition to resume their former healthy state. She, however, ultimately perfectly recovered, but the progress of the cure was very much retarded by several similar attacks, as whenever she ate anything that disordered her stomach, a corresponding alteration in the state of the wounds immediately took place.

There was also a little boy in the Hospital, with necrosis of his tibia, in whom a similar alteration in the local disease was occasioned by disorder of the stomach, brought on by taking, by mistake, some opium pills instead of some calomel and rhubarb, which he had been accustomed to take; and the effects in this case were very extraordinary and remarkable.

The following fact also shews, in the clearest manner, the great change that may be induced in a particular part by disorder of the stomach and bowels.

A boy, about thirteen years old, had his right thigh fractured by a kick from a horse, which firmly united in the usual time. The splints were removed, a bandage was put on, and he was desired to lie in bed for a few days till his crutches were procured, and at this time he was in the most perfect health. During this period, however, all the favourable appearances were changed by his accidentally disordering his stomach, by stuffing himself with apples and other things difficult of digestion. A high degree of constitutional disturbance succeeded this disorder of the stomach, and absorption of the uniting medium took place, so that the broken ends of the bone could be moved on each other as readily as when the accident first happened, and the patient was obliged to undergo a longer confinement before the bones reunited than had been necessary in the first instance.

There was also a little boy in the Hospital, whose kidneys were so much affected by any thing that disordered his stomach, that the urine they secreted more resembled coffee-grounds mixed with a little milk than any thing it could be compared to. At other times his urine was perfectly healthy.

The foregoing facts fully prove the influence the digestive organs have over distant and particular parts of the body; and that their disorder is capable of putting a stop to the healthy actions that are going on in a particular part, and of substituting others unhealthy and morbific.

The influence that particular sorts of diet have over the whole system must be obvious to every one. We must have all observed how the eating too much, too little, or bad kinds of foods, will disorder the stomach, thence the head, and subsequently the whole nervous system. Instances of fits produced by intemperance, by worms, and by many other sources of general or local irritation, are so frequent, and so well authenticated, that it would be useless for me to relate any cases to prove this point. Considering, therefore, that from the facts which have been already stated, it must be admitted, that through improper attention to diet, not only the whole animal economy, but also only a particular part, may become deranged, it only remains for me to prove, that what are called specific diseases, as scrophula, gout, and scurvy, may be produced by the same causes.

The analogy between scurvy and scrophula seems to be very complete, as far as their production is concerned. Thus we see both these diseases occurring under circumstances which preclude the possibility of suspecting any hereditary

tendency or disposition, and when the whole disease must have been generated by what are called immediate or occasional causes. At other times we see the disease occurring where there is no evident immediate cause, or where the same cause is applied to many individuals, and only one shews any tendency to the disease. Too numerous are the instances of the whole crews of ships suffering from scurvy from the want of proper wholesome diet. No doubt, however, that there are other immediate causes of this disease as of scrophula, as climate, want of proper clothing, &c. But in Rees's Cyclopædia I recollect reading a strong instance of the influence of bad diet in producing it. The principal circumstances, as well as I can recollect, are these: Some men were landed upon an island, by order of the Dutch Government, to ascertain whether it was habitable during the winter. They were badly provided with provisions, and, during the winter, they almost all died from the scurvy. The next winter the experiment was repeated; the men, however, being provided with every necessary, they all remained perfectly well.

The influence that diet and particular modes of living possess in producing the gout, is so universally acknowledged, that I shall not enumerate any instances to prove it. It is equally well ascertained, that more may be effected towards curing

it, and towards preventing its return, by attention to the digestive organs, and to the mode of living, than by all the medicines contained in the materia medica.

As, therefore, those disorders, depending upon specific actions, which in their origin and progress most resemble scrophula, are capable of being produced, as well as excited by disorder of the digestive organs, and by other causes which derange the general health, and of being cured, as well as prevented, by avoiding those causes, and by restoring the healthy functions of those organs, I think that if we had no other evidence but what we derive from analogy, we might fairly presume that scrophula is governed by the same laws, and curable by the same means. There are, however, other strong facts tending to prove the influence that particular modes of living have in producing scrophula.

Animals, which in their natural state are but little, if at all, subject to this complaint, when domesticated are particularly liable to it: thus swine are notoriously subject to it; the derivation of the name of the disease being from Scrofa, a Sow, as if they were exclusively obnoxious to it. The domesticated rabbit is equally so; sometimes, although their lives are so short, actually falling a victim to it. I lately dissected one that died of phthisis: the lungs were full of tubercles and vomicæ, and other parts of the body had suffered, as will be noticed

by and bye. I have met with many other instances of the existence of the disease in rabbits. I have also met with the disease in the horse, the monkey, the Guinea pig, and the Canary bird.

These facts very strongly shew the influence that particular modes of living, and unnatural habits, may exert in producing scrophula, and the influence that those causes which impair the general health have, is very clearly proved by the disease so frequently occurring, for the first time, in that delicate state of health induced by a long course of mercury, by the small-pox, or by any other serious illness. Cases of this kind occur too frequently to require any particular illustration. There are, however, undoubtedly many other causes of general disorder, and therefore, indirectly, causes of scrophula, though these can hardly be considered so efficient, as not occurring so frequently, nor so likely to be continued when they do occur. Among these I consider mental disquietude, cold, impure air, and contagions of various kinds. Of the influence that the mind exerts over the body every thinking and observing surgeon must be convinced; and he must have perceived that derangement of the mind often deranges the whole system, though sometimes only a particular part. The effect that anger has over the circulatory system is so well known and established, that it requires no confirmation from me. The effect that fear has over the

whole system, as well as over particular organs, as the bowels, and urinary organs, and the pernicious effects of sudden and unexpected joy and sorrow, are so well authenticated and established, that I should be unnecessarily occupying time if I were to offer any cases to prove them.

My meaning in the whole of this is, that whatever be the cause which disorders the natural actions of the body, and by such disorder substitutes unhealthy ones in their stead, may be, and frequently is, an immediate cause of scrophula; because in a state of constitution thus disordered, scrophula is particularly likely to be produced.

Having thus treated of what are generally termed immediate causes, I will now treat of what Mr. Hunter calls natural tendencies, or predisposing causes.

By natural tendencies to morbid actions, which Mr. Hunter asserts every animal may be said to have, giving it the most liberal interpretation, we must understand a natural disposition in the body to take on certain peculiar actions, whenever the natural actions are destroyed, at all times, and under all circumstances, except when specific causes of disease are introduced, as the venereal virus, small-pox, &c.

From the foregoing statements it might be supposed that it was Mr. Hunter's opinion, that certain diseases were purely hereditary, or dependent upon

some natural or congenital imperfection in the constitution. The following quotations, however, from his Treatise on the Venereal Disease, will prove that he thought differently.

"Constitutions will differ according to circumstances, which may be numerous; two of these, however, will be local situation, and age."

"In this country the tendency to scrophula arises from the climate, which is in many a predisposing cause, and only requires some derangement to become an immediate cause, and produce the whole disease."

Mr. Russell considers climate as one of the principal occasional causes.

Whether the term hereditary is, or is not, applicable to diseases, I will not attempt to decide; but if it be to any, I have no hesitation in affirming, that it must be so to scrophula.

Wiseman, Cullen, Russell, Burns, S. Cooper, and many other authors whom I might mention, consider it as hereditary; while Mr. White, Goodlad, and a few others, advance a contrary opinion.

When I admit that scrophula is hereditary, I do not mean to assert that it necessarily follows, that scrophulous parents transmit their disease to their offspring, nor that their children should be free from it, because their progenitors were; far from it; for I am certain that the reverse of all this takes place.

In proof of it I may state, that I have met with several instances of mothers suffering from scrophulous disease at the period of delivery, and who have a short time afterwards died of it, whose children have shewn no tendency to the disease.

It is so very common for only a part of a family to be affected by scrophula, and for the children of parents who themselves have never shewn any tendency to it to be attacked by it, that it cannot be necessary to adduce any cases to prove it. I shall, therefore, proceed to offer some observations and facts, which seem to prove that, like most other acquisitions, it may be acquired by inheritance.

By an hereditary disease is usually understood a disease, the tendency to which is derived from the parents, and exists from birth.

That the child very generally resembles one or both of its parents, in form and feature, cannot be denied. It being then certain that the outward formation of the bodies is the same, it surely is not too much to presume, that they may possibly resemble each other in their more minute structures, and that they may possess the same peculiarities, and be influenced by the same causes.

Every one must be familiar with instances of large families of children resembling each other in a striking degree, and perhaps one of their parents in an equal degree; though, under these circumstances, it often happens that there is no striking

resemblance to either, but a partial resemblance to both. We all, however, must be aware, that it may occur that some of the children shall resemble the father, and the remainder the mother; and also that a child shall have no resemblance to either parent.

Admitting these peculiarities to occur in the conformation of different bodies, we cannot wonder at the different tendencies to disease which different bodies naturally possess, nor at seeing the whole of a family, or only a part of it, suffering from some particular disease.

That scrophula is one of the diseases influenced by the circumstances mentioned above, is manifest to me, and I conceive must be equally so to every one who attends to the following facts.

I will commence by briefly relating the case mentioned to me a few days ago by an eminent physician, to whom I was speaking about the hereditary nature of scrophula, and of the possibility of curing it when it attacked the lungs.

It is the case of a family in which there were eleven children, ten of whom and their mother died of phthisis, the effect of tuberculated lungs. The eleventh, the eldest, however, remained free from the disease till she was between fifteen and sixteen. At this time she was seized with cough and expectoration of purulent matter, preceded by pain in her side, and accompanied with hectic

and swelling of her ancles. The physician who had attended the rest of her family now saw her, and pronounced her precisely in the same state that they had been a short time previously to their deaths. She, however, after having been reduced to the greatest state of emaciation and debility, completely recovered, and has subsequently enjoyed an excellent state of health.

The next case is that of a farmer, who had nine children. Eight of these, as well as the father and mother, died of phthisis. The surviving son, who is the eldest, has as yet been free from all tendency to it. The father, however, was nearly fifty when he died.

The next is that of a poor family, in which there were three sons, all of whom died of scrophulous disease; the first who died was nine years old, and died of phthisis. The second who was eleven years old, died of scrophulous disease of his knee joint, and of mesenteric disease. The third, who was fourteen years old, died of a tuberculated state of all his viscera and consequent ascites: he also had hip disease. The particulars of these cases will be related when we treat of the particular forms of the disease. The state of the father of these boys I could not ascertain, as they were in a workhouse, but the mother, whom I saw, was evidently phthisical, and she informed me that one of her sisters had died in a consumption.

I am aware that it might be said, that the foregoing cases prove merely that a whole family, or a part of it, may be afflicted with the same disease; and perhaps it might be asserted with some degree of plausibility, if there was no other evidence to prove its hereditary nature, as there is the negative evidence of several individuals in the same family suffering from it, when there is no ground to suspect an hereditary taint.

But as a last, and I think I may assert positive proof of scrophula being hereditary, I will relate the two following cases. They occurred in the practice of Mr. Langstaff, and the morbid parts are preserved in his Museum.

A woman died of consumption in the last month of her pregnancy. Her body was examined after death, as well as that of the fœtus. Her lungs were found full of tubercles, some of which had suppurated and destroyed much of the substance of the lung; in other respects the body was in a healthy state.

The lungs of the child, upon the thorax being opened, were found precisely in the same state as the mother's, being studded with scrophulous tubercles, some of which had suppurated. The rest of the body was in a natural state.

The next case is that of a woman who died also of consumption, a fortnight after her confinement. The child was still-born. Upon examining her lungs they were found to be in the same state as

in the preceding case, being studded with tubercles, some of which had occasioned abscesses in the substance of the lungs. In other respects her body was free from disease.

The lungs of the child were in the same state, and the kidneys also had scrophulous tubercles in them.

As no instance is on record of scrophulous disease occurring in the fœtus in utero, or in the child just born, without its having actually existed in the mother, no negative evidence even can be brought against these facts to invalidate the opinion of the disease being hereditary.

How little it was expected by the gentlemen who denied the hereditary nature of the disease, that cases like the foregoing would be met with, is very evident, from the following passage, selected from an Essay on the Diseases of the Lymphatics, by Mr. Goodlad. He says, "If then scrophula, like other disorders, originated in a diseased action, excited by the fluids, and if once excited it possessed the power of extending its action to any other part of the same or of another system, we should expect *children to be born with scrophulous complaints;* and I know not who would venture to inspect a body with the mesenteric glands enlarged, or with ulcerated lungs."

It is evident, from the cases last adduced, that the circumstance which Mr. Goodlad thought no lapse of ages could produce in refutation of his

theory, has been positively proved, viz. that children are scrophulous in utero. With reference to it, I will only farther observe, that the disease is not communicable by inoculation, as is proved by facts related in Kortum's Treatise, entitled De Vitio Scrophuloso.—p. 218. Mr. Goodlad too, was aware of this, as he endeavoured to inoculate himself, and failed.

Having stated at the commencement of this Essay, that the complexion and natural feature of the patient, are not to be relied on as certain symptoms indicating a particular tendency to scrophula; but still, that they are not to be overlooked as unimportant. I will here state the circumstances under which I think it may be of importance to observe them.

When we suspect an hereditary taint, from our knowledge that one or both of the parents have had the disease, I should think it of considerable importance to observe the form and feature of the child, the colour of its complexion, of its hair, and of its eyes; and indeed every other circumstance which would enable us to judge of its resemblance to its parents. In other cases, however, I repeat, that I do not believe fair complexions, light hair and eyes, indicate a particular tendency to scrophula, nor that one sex is more subject to it than another.

TREATMENT OF THE DISEASE.

HAVING treated in a general way of the characteristic signs and nature of scrophula, and of its origin and causes, I proceed to speak of what may be termed its constitutional treatment, deferring the minutiæ and local treatment of particular cases to the second part of this Essay.

As the tendency to a disease may exist without its being called into action, when we know of, or suspect this tendency, of course our treatment will principally consist in avoiding, or counteracting, all the immediate or occasional causes.

As, however, scrophula is a disease, a disposition to which may be acquired, when there is no natural or hereditary tendency, and as those causes termed immediate, or occasional, may from certain circumstances become, as Mr. Hunter informs us, predisposing causes, and produce the whole disease, it might, à priori, appear that we can have no fixed or determinate principles to guide our practice. From repeated observation, however, I am convinced, as I have stated before,

that there always is a disorded state of health antecedent to those changes in the structure of parts, which are called scrophulous diseases, whether they are the effect of an acquired, or of an hereditary tendency; and, therefore, that our treatment must be always founded on the same principles, though, of course, it must be modified according to any particular circumstances which may attend particular causes.

That climate is in this country a frequent cause of scrophula I agree with Messrs. Hunter and White, and therefore in our treatment it must be important to attend to this point.

The frequent vicissitudes of heat and cold seem to be the true explanation of this cause; for when these are the greatest and most frequent, its effects, viz. what we call colds or catarrhs, are the most apparent. How much the whole frame may be disturbed by cold we have all experienced. The rationale of its operation on the body appears very simple. Its immediate effect is to diminish the temperature of the surface of the body; the natural consequence of which is diminished action in the extreme vessels; and as there is always a disposition in the body to preserve equilibrium of action, the heart and large arteries exert a greater force to restore the action of the smaller vessels, and produce what is termed re-action, which, however, from the great degree of cold that has

been applied, or from other circumstances, becomes excessive; and fever, or some other effect equally bad, ensues.

I believe, however, that the climate would be but little injurious to us, if we took care that the natural functions of the body were performed in a regular and healthy manner; and if it were not for the absurd practice of sitting for hours in close warm apartments, and then going into the open air where the temperature may be twenty or thirty degrees lower, without any additional clothing, except a covering for the head.

In our treatment there are certain localities which should be attended to; thus we should avoid situations that are much exposed, and also those that are very damp, as the effect of cold is much greater when conjoined with moisture.

The influence that climate has on the disease is very evident, from the fact of its being hardly known in very cold, or very hot countries, and from its prevailing most in certain latitudes, as between the latitudes 45° north and higher latitudes. In Africa, in Italy, and other warm countries, the disease is little known; yet when the natives of these countries come to reside in this country, they are very subject to it.

Mr. Goodlad tells us, that the inhabitants of Manchester are particularly subject to scrophula, and it appears that they are exposed to great

vicissitudes of heat and cold, being pent up during the day in the cotton mills, and at night exposed on a sudden to cold and damp.

As then it is not the excess of heat, or of cold in this climate, which renders it so accessary to the prevalence of scrophula, but the frequent vicissitudes, the principal object of the treatment must be to preserve the temperature of the surface of the body as equable as possible. To effect this purpose entirely will certainly be impossible, but a great deal may be done by the use of proper clothing; by which I understand, such clothing as will protect the surface of the body from being acted upon by cold damp air. A great deal might be said upon this point by describing the advantages which one kind of clothing possesses over another, but I believe the only direction of importance that can be given is, to wear woollen clothing next to the skin. The two following cases prove the benefit of warm clothing.

A young woman of very delicate health, who had had for several years the lymphatic glands of her neck diseased, and suppurating one after the other, and leaving ulcers difficult to heal, which were evidently of a scrophulous nature, was attacked with pain in her chest, and cough, which were very obstinate, and resisted all the usual remedies.

After this, when it was believed that her cough

was incurable, and that she was in a decline, she was recommended to clothe herself from head to foot in flannel, which she did ; from that time her cough began to get better, and in a few months was quite well, as were all the swellings and ulcers in her neck, which had for some years resisted all the medical remedies that had been employed. No new medical treatment was made use of during this period, and all the medicines she took, were linctuses for her cough, and occasional doses of opening medicine. It is worthy of remark, that till she had recourse to additional clothing, she was particularly susceptible to colds, getting catarrh, sore throat, or inflamed eyes, on every trifling exposure to colder air than usual.

The next case is that of a little delicate boy, who had strumous affection of the glands of his neck, and symptoms of tuberculated lungs, as hacking cough, and hurried respiration. These symptoms had existed for about two years, and during two seasons he had been at the sea side ; but without receiving any positive benefit. He had also during this time made use of all the different specifics which are recommended for scrophula ; but never acquiring more than temporary relief from any of the remedies, it was determined to try what would be the effect of warmer clothing than he had been accustomed to. He was therefore clothed in flannel, and his general clothing

was so proportioned as to prevent the variations in the temperature of the air from having any sensible effect on his body.

Under this treatment it was soon perceived that his health improved very much, and in a few months he had entirely lost his cough, and the enlargement of the glands of his neck had also disappeared.

He has since this time, which is five years ago, remained perfectly free from the disease, and his general health has been extremely good. His diet during this time has been principally milk, which he prefers to any thing else, but he is not debarred from eating a little meat once a day. This is the whole of the medical treatment that was adopted, and surgically, nothing was done except keeping a piece of soap plaister to the swellings of the neck.

These two cases have been selected from several others, as the scrophulous diathesis in both appeared to be very strong, and yet it was entirely removed without the assistance of any specifics; and as they prove the benefit to be derived from warm clothing in a very striking degree.

I have stated, that in the treatment of scrophula, our primary object must consist in avoiding, or counteracting, all the immediate or occasional causes: and here much attention and a nice discrimination will be required, as Mr. Hunter has

pointed out to us that a variety of causes are capable of producing one effect.

It would be obviously absurd to treat any disorder depending upon a variety of causes, by attending to only one of those causes, or to attempt to restore the natural functions of any organs, by any remedies acting specifically on them, while any of the immediate or occasional causes of their derangement still existed.

I have stated that in scrophulous disease there is generally what is termed a delicate state of health, great nervous irritation, greater susceptibility than natural; so that certain external agents, as cold, &c., applied to the body, produce unusual effects; and that there is always more or less disorder of the digestive organs; and that upon accurate investigation, this state of the system will always be found to have existed for some time previous to the appearance of the disease in any particular part.

The appetite of patients in this state is always impaired; they become very nice in the selection of their food; but when they have procured what they like, they will often eat voraciously, though others even then eat very sparingly indeed. I have generally observed that they are very fond of stimulating drinks, being very eager after porter or wine.

As children are so much oftener the subjects

of this disease, we can only get a true account of the previous symptoms when it occurs in families in which we are intimate, for it would be generally more easy to procure an accurate and sensible account from the lisping child than from the generality of mothers. We are, therefore, oftener obliged to act in the treatment, rather from our belief than our knowledge.

From the nature of the constitutional disorder that attends and precedes this disease, we might be induced to believe that the disease entirely depended upon disorder of the digestive organs, produced by various causes acting immediately on them, or mediately through the nervous system.

That the cause too, is commensurate to the end will be readily allowed by all who, for a moment, consider of the vital importance of their functions. But whether this is the case or not, as I do not intend to theorize, I shall not offer any opinion ; but content myself with knowing, that, in the prevention and cure of the disease, our attention must be principally directed to these organs : in the prevention, by avoiding all those causes which tend to disturb their functions—and in the cure, by tranquillizing irritation, and by restoring their healthy actions.

The means that we possess of gaining these ends are now to be considered. The causes and modes of avoiding them have been already dis-

cussed, we will, therefore, at once proceed to what is called the medical treatment.

I am aware that this part of the subject is, usually, by systematic writers on surgery, left for the consideration of the physician; but I am sure that every scientific surgeon of the present day is convinced, that, in the cure of local disease, he must mainly depend upon the constitutional treatment, and that he will not be content with applying a plaister to the sore; and so by leaving the rest of the treatment to another, reduce his own art to a level with the carpenter or the plaisterer, and yield the palm of science wholly to the physician.

All writers on this disease appear to have considered it a paramount duty to recommend some particular medicine as a specific, or to discuss the merits of all the specifics, and then inform us which they prefer; and, indeed, so numerous are the specifics, that it is wonderful we should have any trouble in curing the disease.

For my own part, I believe that no medicine we are acquainted with possesses any specific power over the disease; as I have repeatedly seen all those medicines, as soda, conium, cinchona, mercury, muriate of lime and of barytes, steel, and the different mineral waters, which at different times have been recommended as specifics in scrophula, fail, even without producing any visible

effect on the disease. It is true, I have often seen patients recover who have been suffering for considerable periods, while taking some medicine which has been considered a specific, after having tried various other medicines without effect, and in the first instance the one which now appears to be curing them.

It is a few happy circumstances of this kind that acquire for different medicines their reputed virtues, and for different practitioners their specifics; and we cannot wonder that many professors of the healing art, whose field of observation is hedged in on every side, believing that they have a specific, should use it on every occasion; and their perseverance being equal to their faith, that many of their patients should get well, and so keep up the farce; for, when we read that the blood of Charles, the touch of a king, or a piece of gold given by a king, were specifics in the disease, can we be surprized that the specific of the doctor should be equally efficacious?

Wiseman asserts, in his Treatise on the King's Evil, "that his Majesty cureth more in one year than all the chirurgeons of London have done in an age."

We also read in page 246 and 7, that the blood of Charles I. cured numbers. He also makes the following absurd admission in Book 14. chap. i. "I myself have been an eye witness of many hun-

dreds of cures performed by his Majesty's touch alone, without any assistance of chirurgery; and those, many of them, such as had tired the endeavours of able chirurgeons before they came hither."

Dr. Johnson, it is well known, was taken to London by his mother to be touched by Queen Anne; and the form of prayer, desiring the blessing of Providence upon the royal remedy, was retained in the liturgy to the end of that reign. These facts are sufficient to prove, not only the lateness of the period at which so absurd a superstition gave way in this country; but they prove also, that scrophula was at that time considered as a disease not to be removed by any natural or human means.

I omit any further consideration of specifics, although by so doing I am afraid I shall be obliged to recommend a plan of treatment which will have no authority to support it, at least that of no professed author on scrophula. I must, therefore, rely entirely for its support on the cases which will be related in the second part of this Treatise.

To treat diseases on a scientific plan, we should adopt sure and self-evident principles; and as in the body there are certain functions called vital, which in a state of health are performed in a particular manner, it is obvious that if any part of the body becomes deranged, we should direct our attention to the condition of those functions, a

particular performance of which is essential to health ; and having discovered which of them are out of order, we should endeavour to restore them to their natural state.

Now, as in scrophula there always is, as has been already stated, more or less of disorder of the functions of the digestive organs, and primarily of no other important function, it necessarily follows, that the principal indication in the cure is to remove their disorder.

When treating of the immediate causes of scrophula, improper attention to diet has been mentioned as one ; and I may here safely add, that it is a most frequent cause of disorder of the digestive organs. It therefore necessarily follows, that we should be particularly attentive to the diet of our patient. To attempt to describe the particular diet that scrophulous patients should live on would be absurd, but the principles which should guide our choice may be stated in a few words.

We should avoid every kind of stimulating diet, but it should be good and nourishing—as milk, eggs, arrow root, meat jellies, &c., but of none of these more should be eaten at once than can be easily digested, and the meals should be taken at regular periods, and after regular intervals, for nothing can be worse than living irregularly ; perhaps fasting for the whole day, and then eating one immense meal, as the natural consequence of

it, must be to excite the whole system to a state of fever, besides the immediate bad effect that it has on the stomach and bowels. All stimulating liquors too should be avoided; and as hunger and thirst are, as Mr. Abernethy states in his Lectures, incompatible sensations, eating and drinking should not be indulged in at the same time, but the same regularity should be observed in the one as in the other.

Of course, the above observations apply to the simple state of a scrophulous constitution which is not suffering from the local disease which exists, and not to those complicated cases in which the local disease has gone to such an height, and is producing so much pain, that all the natural functions are disturbed and hectic induced. In these latter cases, experience teaches us that generous diet and stimulating drinks are not only admissible, but useful.

The next point of importance in the treatment, is the keeping the bowels regular, and the hepatic secretions natural. The means that I would make use of for the accomplishment of this point are the following. If the patient be an adult, and the bowels obstinately confined, I would give him five grains of the blue pill, every night, and half a pint of Dec. Sarsæ. Co. twice a day; and if by a certain time of the day the bowels had not been open, I would give some opening medicine, and repeat it

at certain periods until it operated. This plan I should pursue till the bowels become regular, and then, to prevent their relapsing into the same state, I would continue the exhibition of alterative doses of mercury for an indefinite time; and the form I would make use of would be the compound calomel pill, in doses of five grains every other night. If it be a child that is affected with this disease, the same principles would guide my practice; but as the constitution, as well as the age, of children who become affected with this disease may be very different, it is impossible to know at once what medicine will be applicable to each particular case. Indeed every one must have observed that the same medicine may act very differently on children of even the same age: and that what purges one violently will have no effect on another. We should too be very careful not to give violent purges, and we should particularly avoid large purgative doses of calomel, as I am convinced they often produce more general irritation than the evacuation they occasion from the bowels is able to relieve; and that they often so much weaken the stomach, that it is a very long time before it is able to recover its natural powers. Our object, therefore, in prescribing medicines, should be to procure a proper emptying of the bowels daily, and a healthy condition of the digestions. This I admit is often a difficult point to

obtain, but by proper management we may generally succeed. Any of the mild purgative medicines may be employed for this purpose, and if one does not appear to have the proper effect, we should desist from its use and substitute another; but we may derive the greatest assistance from exhibiting alterative doses of calomel at the same time. The dose should be varied from half to one grain, according to the age and habit of the child, and repeated twice or thrice a week. Sometimes, in particular states of the stomach and bowels, it is better to combine the calomel with the purgative, and at other times they act better given separately. The very great influence which evacuations from the bowels have over the rest of the body cannot be denied by any impartial observer; it is therefore certain, that by increasing or diminishing them we are able to produce a decided effect on the whole, or, as I have proved before, on a particular part of the body. Thus, if there is much general irritation, or local irritation and inflammation, by increasing the intestinal evacuation, taking care, however, not to irritate the bowels, we may very much relieve both the one and the other. The importance therefore of attention to the state of the bowels is obvious.

It will, however, be in vain to attempt to improve the state of the health, or to regulate the action of the bowels by any medicines we can

administer, if, at the same time, the rules I have laid down for the diet be not observed. For if the stomach be overloaded with food, no proper digestion can take place, and if the food be of an improper quality, or in improper quantities, no medicines can act beneficially on the bowels.

It sometimes happens, that there is a great degree of acidity prevailing in the stomach, which remaining there, or passing into the bowels, may do mischief; therefore, to guard against this, till the cause of this morbid secretion is removed, I would exhibit small doses of soda, or of any other alkali, though I prefer soda as the most palatable.

When there is what is called a weak stomach, with loss of appetite, I have often seen the different tonics, as cinchona, steel, and the mineral acids, of the greatest service, and would certainly administer them; but I am sure, as I have said before, that they possess no specific power over scrophula. Moreover, I feel certain, that a great deal of mischief is often produced by the exhibition of these medicines, in conjunction with a stimulating diet; and that diseases, which might otherwise be speedily relieved, are by these means rendered fatal to the patients. Too often have I seen medical men, when consulted about children with swelling of the glands of the neck, or other scrophulous affection, at once declaring them in a delicate state of health, prescribe a generous diet, as full meals of

meat, with porter and wine, with the use of bark, steel, or some other strengthening medicines as they are called, merely because the disease was scrophula. Too often have I seen this plan pursued in cases where, on more accurate examination, I have found the patient requiring a plan of treatment directly the reverse. I have found frequent complaint of head-ache; a peculiar whiteness of tongue and hurry of pulse, which every surgeon of observation well knows to indicate some local inflammation, and which is very different from that quickness of pulse depending on debility; the belly tumid, and the bowels constipated; frequently also, watchfulness and restlessness at night. Indeed, I have been truly astonished when I have seen this plan of treatment pursued; for any one who knows any thing of the nature of this disease must, on the least reflexion, at once perceive that it never does any material mischief in whatever part it exists, till it takes on the inflammatory form. How absurd then, how culpable does it not appear, to make use of that plan of treatment, which decidedly of all the means we possess, must be the most likely to occasion that state which we ought to be most anxious to prevent?

It is true, however, that when children are first put on this plan of treatment, they appear to the common observer immediately to improve in health. A species of fever is produced, the cheeks

become fuller and flushed, and the exhilarating powers of the stimuli heighten the spirits of the child, so that the delighted mother feels greater confidence in her doctor, and expects soon to see her child perfectly recovered. But too soon, however, these favourable appearances are generally proved to be fallacious, by the discovery of some fresh swelling, or by the child evidently becoming weaker and more irritable. It is equally true too, that when children are put on a different plan of treatment, they often, for the first ten days or a fortnight, become paler, and perhaps weaker; but after this period, if there be no important visceral disease, it will always be found that the irritation of the disease subsiding, they gradually recover strength and flesh, though perhaps taking only half the food which they were accustomed to before.

Perhaps, among all the remedies that have ever been recommended for scrophula, there have not been any more popular than sea-air and sea-bathing. Indeed so universal is the prejudice in their favour, that I believe it would be almost hopeless to combat with it. Perhaps, however, the prejudice in favour of the royal touch was once as great!

I feel, however, bound to declare, that I do not believe cold sea-bathing has any specific power over the disease. I have seen it fail in removing the

complaint in almost all its various forms; nor do I know a single instance, in which I could fairly say that it had removed it.

Cold sea-bathing, however, is certainly useful, when judiciously applied, where there is a disposition to scrophulous disease; and perhaps it is so, by rendering the body less susceptible of cold, and therefore less likely to be influenced by the vicissitudes of climate. It is also extremely useful in that debility which is induced by the disease when it has long existed in any of the joints, provided there is no active disease going on in any of the viscera.

It does not, however, appear to have any power in the discussion of scrophulous tumors, nor in the healing of scrophulous ulcers.

Whenever there is reason to suspect tubercles in the lungs, or even if they shew any disposition to disease, I certainly should altogether interdict the use of cold bathing. Indeed for such patients I must consider even the sea-side as the worst possible situation: and as all scrophulous patients have a greater disposition to disease in those organs than common, I must consider it a very dangerous practice, when scrophula has once shewn itself, for such patients to reside wholly at the sea-side. Numerous, indeed, are the cases which at this moment recur to me of patients who have been sent to school at the sea-side, on

account of some slight scrophulous disease on the arm, foot, or some other part, which might have been readily and easily cured at home, dying within a year or two of scrophulous disease of the lungs.

I should therefore insist on scrophulous patients not remaining longer than four, or at most five months of the year, at the sea-side; and I may add, that generally I do not believe there is any material benefit to be derived by sending them there.

Good air and exercise, however, are of course conducive to the cure of this disease, like all other circumstances which tend to promote the regular performance of the vital functions.

I have not often witnessed the use of warm bathing in these complaints, but when I have it has seemed to injure the general health. In one patient, who had scrophulous affection of the lungs, it was decidedly injurious, by hurrying the respiration, and quickening the pulse.

No general rules for cold bathing can be laid down which shall be applicable to particular cases; as the best time for bathing, and the period it is right to remain in the water, must depend upon many collateral circumstances, as the temperature of the water, the particular effect it produces, and the strength of the patient. It is very common for medical men to recommend sea-bathing to

patients who are labouring under disease of the spine, hip, or knee; but this is a practice which should never be followed, as it must be always injurious, and I believe is never necessary: it must be certainly injurious by interfering with that state of rest which is essential to complete recovery; I mean recovery without deformity: and it is not necessary, because patients who would recover while they are using sea-bathing, would invariably recover without its assistance, as the cases related in the second part of this Treatise will fully prove. I saw a case the other day which proves the inefficacy of sea-bathing in the cure of these diseases. It is the case of a little boy who had disease of the right hip-joint, and about whom I was consulted a little more than two years ago. At this time I made an issue behind the great trochanter, and kept the child lying down, and the case went on as favourably as possible. A few weeks after, however, I was taken ill, and therefore unable to attend the case. Another surgeon was therefore consulted, and he at once recommended that the child should be sent to the sea-side, which was immediately done, and he continued there till very lately. Since his return I have seen him, and I certainly never saw a much more horrible state of deformity, or a case more fully proving the inutility of sea-bathing in these diseases. The spine is much curved, the

right hip forms an immense projection, the thigh is dislocated and much bent on the body, the knee contracted, and the leg bent on the thigh, and the limb so much shortened that, with the foot bent downwards, the toe will only just reach the ground: and what is worse than all the disease is still going on. Now I am fully convinced that the whole of this deformity, except perhaps a trifling shortening of the limb, is entirely owing to improper treatment, to want of rest, and to the body not being kept in a proper position. This child, however, must remain a complete cripple, and an object of pity as long as he lives: I believe, however, that the disease may now be put a stop to, and some part of the deformity removed.

From the foregoing observation I think the following conclusions may fairly be drawn.

First, That scrophula is hereditary, but that the tendency to it may exist without its being called into action.

Secondly, That a disposition to it may be acquired where there is no hereditary tendency.

Thirdly, That all those causes which tend to derange the natural actions of the body are capable of inducing scrophula, and that it always is a constitutional disease, that is, never depending upon local causes only.

Fourthly, That the disease may generally be prevented by avoiding all those causes which

have a direct influence in disturbing the general health.

And fifthly, That the disease is only to be cured by avoiding all sources of irritation, and by restoring the natural and healthy functions of the digestive organs.

PART II.

ON THE

LOCAL EFFECTS OF SCROPHULA.

When the state of constitution, which has been described in the first part of this Essay, becomes established, there is no structure, nor particular part of the body, which may not be attacked by scrophulous disease; but experience teaches us that some parts are more obnoxious to it than others. The lymphatic system in general, but particularly the glands in the neck and mesentery, the lungs, and spongy parts of the bones, undergo those changes which we consider as scrophulous, oftener than other parts; and as, has also been observed before, age seems to influence the liability which particular parts have to the disease.

It sometimes, however, happens that parts, the perfect state of which is essential to the continuance of life, become attacked by this disease before proper means are had recourse to, to arrest its progress; and then, as is obvious, all the means

we employ for the removal of the constitutional, or local disorder must generally fail; and it is, I believe, only under these circumstances that we need ever despair of curing the disease. I here particularly allude to tubercles in the brain, lungs, or heart, and to very extensive disease of the mesenteric glands. I should, however, add, that if there be any other irremediable cause of general disorder, it will effectually prevent any measures we may adopt from benefitting the scrophulous disease.

In the treatment it is of considerable importance to observe, that when the disease has gone to such a height in one part, as to destroy the structure of that part, it may in another part be completely in an incipient state; so that if we remove this part we must not feel sure that we have removed the whole disease, as it may soon become visible that it has attacked another, and perhaps a more important part.

It has been sometimes said, that if you remove the part that was first affected, and which has gone on to a formidable state, the disease will certainly be more liable to make its appearance in other parts. But, if this is the case, let me ask how it is that the most characteristic mark of this disease is its affecting parts successively, so that as one gets well another becomes affected? and that when the hip is affected, a part that

cannot be removed, the patients seldom die of this, but of the same disease occurring in their lungs or mesenteric glands? Surely, therefore, we are not justified in ascribing the subsequent disease to the removal of the original. I will, however, dismiss this subject till we come to the treatment of diseased joints.

Having premised these general observations, we will proceed to treat of the subject in detail.

I commence with treating of scrophulous affection of the glands, as those of the neck are generally the first parts which are affected, requiring the assistance of the surgeon.

OF SCROPHULOUS AFFECTION

OF THE

LYMPHATIC AND SOME OTHER GLANDS.

If we examine a scrophulous gland in an early stage of the disease, we find that it is simply enlarged; and the enlargement seems to be owing to thickening of its cellular structure, as its vessels are completely pervious, quicksilver passing as readily through them as through one that is not diseased, as was ascertained by Soemmering. As it increases in size the same change goes on; the gland, however, appears to have more nutrient vessels, and is redder than is natural. If the disease is not put a stop to, the whole structure of the gland becomes altered and destroyed, and new matter is gradually deposited, which sometimes is firm in texture, and very much resembles cheese, and when divided, shews an even surface, of a mottled yellowish white colour. At other times the gland is converted into a much softer matter, less uniform in texture, and when cut into appears to be composed of two kinds of matter,

the one resembling curd, while the other is softer, less opaque, and of a yellow colour; it sometimes appears too, as if small quantities of pus were deposited about the centre of the gland; and sometimes there are small abscesses containing a scrophulous matter in the body of the enlarged gland: this matter subsequently makes its way to the surface, and the gland becomes part of a large abscess. The covering of the gland till this period generally remains entire, but now inflames; and the inflammation spreading to the surrounding parts, the whole suppurate, and form an abscess, of the contents of which the newly formed matter of the gland makes a part, and so all relics of the gland become destroyed. It sometimes, however, happens, that the suppuration only takes place round this newly formed matter of the gland, which may be seen through the aperture through which the contents of the abscess have been discharged, and between it and the sides of the abscess you may readily pass a probe on every side. When this is the case, the healing of the wound is very tedious; but that this is the altered substance of the gland, and not sloughing cellular substance, as has been stated, I entertain not the slightest doubt, from having examined it after it has come away in the poultice, subsequently to my enlarging the aperture, either with a knife or with caustic. This complete change in the substance of the gland does not necessarily take place; for it frequently

occurs that the gland being simply enlarged, as mentioned at first, the surrounding parts become affected with scrophulous inflammation, and matter forms, which is at length discharged through one or more ulcerated openings.

That the gland is not included in the suppuration, is evident from its now being as large as it was before the formation of the matter, and from the probe not passing beyond its surface. The skin covering these abscesses remains discoloured for a long time before they discharge their contents, and even after they have, and this appears to be owing to the distention ensuing so gradually. We know these abscesses to be scrophulous, from the matter which they contain, which is a whey-like fluid, mixed with a curd-like matter; though part of the contents often seem to be tolerably good pus.

Several glands often enlarge at the same time, and continue distinct, till they have each acquired a very large size, but at length coalescing, form one immense tumour, which sometimes presses so on one side of the larynx and pharynx as to impede respiration and deglutition. These tumours, even when they have obtained this size, may entirely subside without the formation of matter, though, I think, they oftener suppurate in several places, leaving ulcers tedious in healing. I will briefly relate two cases of this kind:—

The first is the case of a young man, a patient

in St. Bartholomew's Hospital, aged twenty-one years, who had several glands of the right side of his neck enlarged for above two years, without their producing much inconvenience; but his health becoming very much deranged they increased in size, coalesced, and formed a large tumour, in which there was no fluctuation, which produced great difficulty of breathing and of deglutition, and was attended by violent head-achs. By attending to his general health in the manner that has been recommended, by applying six leeches twice, and a bread and water poultice night and morning, the tumour diminished at least two-thirds in the space of ten weeks; and subsequently entirely disappeared.

The next is the case of a young woman, aged fourteen, who was also a patient in St. Bartholomew's Hospital. The glands of the right side of her neck had been considerably enlarged for between four and five years; but between three and four months before her admission into the Hospital, her bowels became very irregular, being either much constipated or purged; and the swellings now became painful, enlarged rapidly, and formed one large tumour, which greatly impeded respiration, as in the former case. There was no fluctuation now to be felt; but the swelling had come on so rapidly, and the distention of the skin was so great, that erysipelatous inflammation

attacked the face, head, and neck, accompanied by delirium, and a high degree of constitutional disturbance. She, however, by means of the usual remedies, and by taking off the tension of the skin, by applying warm emollient poultices all over the swellings, recovered from this accidental attack. Her bowels, however, still remained irregular; and an abscess formed on the surface of the tumour, which was opened, and a quantity of scrophulous matter discharged, without, however, much reducing the size of the tumour. The opening continued to discharge till she went out of the Hospital, and the tumour gradually receded, but not so fast as in the former case, when no suppuration took place.

I have seen many cases of this description which I might relate, but these two are sufficient to prove the fact of the coalescence of diseased glands, and to shew the consequences that may ensue from their excessive enlargement. It is not only the lymphatic glands of the neck which become diseased from scrophula, but those of other parts of the body are equally liable. It is very common to have a gland enlarge, and form an abscess about the middle of the tibia; just behind the inner condyle of the femur; also just above the inner condyle of the humerus; on the inside of the ulna, near the olecranon; and above the middle of that bone: above the clavicle too is

not an uncommon situation. The glands of the groin are frequently affected.

All the other glands of the body are liable to be affected by scrophula, but not equally so with the lymphatic. The parotid glands are sometimes attacked with this disease.

I had a patient, a young woman, aged twenty-eight, who had a scrophulous abscess form in her right parotid gland. It had the true characters of a scrophulous abscess: it was very tedious in its progress; the skin covering it was what Mr. Russell calls the true purple colour: the matter was truly scrophulous, and it discharged itself by several small apertures, incompletely at first, but subsequently it contracted so as to empty itself. The whole gland was not diseased, as there was for above a month a continual flow of saliva from the ulcerated opening, which, however, ceased, and the ulcer entirely healed. She had subsequently a similar state of the submaxillary glands, and of the opposite parotid, and also of a gland just above the left clavicle; but she ultimately recovered.

Scrophulous abscesses also sometimes form in the thyroid gland, but I believe they are in no way connected with the common enlargement of this gland. I have known the prostate gland affected in several instances: in two the patients died. The cases will be related by and bye.

Scrophulous abscesses may form in every part of the body, independently of the glands, but when this is the case I think they generally suppurate more quickly. They sometimes are solitary, only one occurring; though at other times they are numerous, and form like encysted tumours. A case of this sort will be found in the former part of this Essay. I also attended an infant only seven weeks old, which had six abscesses of this description on different parts of the body. It is very common to have a single one form on the chest, or about the angle of either of the ribs.

Mr. Russell states, "We find encysted tumours on the different parts of the body, which are filled with a thick curdy purulent looking matter, or with serum, containing white flakes, or little lumps of a white substance."

It should be observed, that in scrophulous swellings, where there is evident fluctuation, and even a certain degree of tension, the fluid may be entirely absorbed, and the swelling disappear. These cases are not very infrequent.

Authors generally describe a great many other particulars relating to scrophulous tumours and abscesses, as veins passing over them, their being sometimes hard, sometimes soft, and so on; but as they are all uncertain and equivocal, I think it is better to pass them over in silence.

The abscesses connected with disease of the joints, of course, will be treated of in the section appropriated to their consideration. Sometimes I have met with glands of the neck so enlarged as to form a chain, passing under the chin from ear to ear, in the form of a horse shoe.

Mr. Brodie, in his late publication on Diseases of the Joints, gives external cold as the cause of particular parts being so frequently the seat of the disease; and further states, that the hip and shoulder are less liable to the disease than other joints, from being less exposed to the influence of the external cold. That the lymphatic glands of the neck are more subject to this disease than those of other parts has been already affirmed; but that this is owing to the local influence of cold, as Mr. Brodie asserts, remains to be proved. It appears to me that this is not the fact; and that it is rather attributable to those glands possessing a stronger natural disposition to take on the diseased action, than those of other parts. I am the more inclined to adopt this opinion, as in adult age, when a scrophulous tendency is acquired, these glands do not particularly, and so often suffer; but the disease seems to confine its action principally to the joints and lungs.

However, that external cold may be applied to a part, so as to become a local exciting cause, when the scrophulous disposition has been pre-

viously produced, it is reasonable to believe; but a greater influence than this we are not warranted in admitting. The frequent and contemporary occurrence of the disease in the mesenteric glands also seems to militate much against the opinion, as they are certainly not in a cold situation. Wiseman states, that the mesenteric glands are most commonly affected whenever the patient is strumous. Vide p. 250, of his Chirurgical Treatises.

The changes that take place in the lymphatic glands as life advances, would, à priori, lead us to suppose, without knowing the fact, that their susceptibility to disease would be altered.

Mr. Cruickshank, in his Anatomy, p. 72, informs us, that in the young subject the absorbent glands are red, but as they grow older they become paler, and proportionally smaller. Indeed the diminished vascularity and increased firmness in the glands of the adult must be obvious to the most superficial observer.

It appears that the absorbent vessels, as well as the glands, may become scrophulously affected. This I have never been able to prove by dissection, though I have long suspected it, from having seen true scrophulous ulcers form in the course of the absorbents. Mr. A. Cooper, in the Medical Records and Researches for 1798, states, that sometimes the valves of the absorbent vessels

become thickened, and obstruct the vessel. The thickening seems to be the effect of a scrophulous disposition of a curd-like matter.

The thoracic duct is also sometimes affected by scrophula. In a case related by Mr. Cruickshanks, in the Medical Records and Researches, two-thirds of it were filled with a caseous matter. The patient had scrophulous affection of other parts at the same time.

The uniformity of the effects of scrophula in whatever part it attacks, though of course it is somewhat modified, as the structure is more or less favourable to its developement, fully proves its title to be termed a specific disease, and its action to be an action sui generis.

To discuss the peculiar nature of this specific action would be idle and absurd; it is sufficient to notice its immediate effect on the part when first it attacks, viz., its increasing its vascularity; and the observation of this fact appears to have induced Mr. Goodlad to make the following observations:—

"If scrophula pursues the action of, and is excited by, whatever excites chronic inflammations, if it occurs where indolent actions must of necessity be found, and in those situations where inflammation is likely to be produced; if it arise after debility, by whatever cause produced, and varies in degree and duration according to the

constitution, I see no necessity to call in the aid of a something which is not cognizable to our senses, and cannot be traced by its effects. I am the more particularly averse to such a supposition, until it can be shewn that these bodies are not liable to simple chronic inflammation, and wherein that inflammation differs from the disease in question."

Mr. Goodlad could never have cultivated morbid anatomy, otherwise he would have at once perceived the fallacy of the foregoing observation; he would have perceived that, although all these parts are subject to simple chronic inflammation, in that state none of those morbid changes subsequently take place, which are the characteristics of scrophulous disease, in whatever structure it occurs.

I have endeavoured to account for the lymphatic glands of the neck being more frequently attacked by scrophula than those of other parts, by stating that they may possess a stronger disposition to take on diseased action. Now it may appear, á priori, rather paradoxical, that two parts of the same structure, and having the same function to perform, should have different degrees of susceptibily to disease; but a moment's reflection must prove it to be a fact. Indeed, every surgeon who has studied and observed the phenomena of cutaneous diseases must have abundance of evi-

dence to prove it. He must have observed that particular cutaneous diseases affect particular parts, and that, though they sometimes deviate from their natural course, there is sufficient regularity to prove the fact. It will be sufficient to instance the herpes zoster, or shingles, a disease which, though it is generally attended and preceded by very great constitutional disturbance, is always confined to the trunk of the body, and almost always to a particular part of it. Now I am sure that no one will assert that there is more visible difference in the structure of two pieces of skin than in the structure of two lymphatic glands. And then, as it is certain that particular parts of the skin have particular susceptibilities, is it not fair to presume that certain of the lymphatic glands may more readily than others take on the scrophulous action?

TREATMENT.

As all these diseases depend upon the state of the constitution, the most judicious local treatment will be unavailing if proper constitutional remedies be not made use of at the same time.

When the glands have become simply enlarged, and appear in an indolent state, the less that is done to them the better, as nothing but constitu-

tional remedies appear to have much influence upon them in that state. It may, however, be right to bathe the part with salt and water, or any other cooling wash, to prevent the surrounding parts becoming irritated by the pressure made on them by the enlarged gland. In the more advanced stages of the disease the treatment consists in allaying irritation by soothing applications, and by applying leeches if there is much pain. When several enlarged glands, having remained in an indolent state for some time, suddenly begin to enlarge, are painful to the touch, and seem disposed to coalesce, although the superincumbent skin is neither discoloured nor tense, the application of leeches and cooling washes is often highly serviceable: but when they have coalesced, forming a large tumour, and the skin above is tense and discoloured, the best applications are warm emollient poultices, as they tend to take off tension, and consequently allay irritation. If, under these circumstances, it be judged necessary to apply leeches, on account of the great irritation and pain, they should not be applied to the discoloured skin covering the tumours, but rather at some little distance from it, and then they may be serviceable, though without this precaution they might have increased instead of diminished irritation.

It often happens that when the swellings have

arrived at this height an abscess forms; but it also often happens that they become indolent, and the pain and tension both subside; the tumour, however, remaining undiminished, will, upon examination, be found to contain, on its upper surface, a small quantity of fluid. In this case the application of a blister, to be kept open for a few days, and repeated according to circumstances, will often promote rapid dispersion of the fluid, and indeed sometimes of the whole tumour. The application of blisters and other stimuli, in glandular swellings, without great discrimination, would, I believe, be attended with much mischief.

When an abscess has formed, it often becomes a question whether we should open it, or allow it to be opened by ulceration. This is a question, however, which admits of no definite answer, as no positive rule can be laid down. It must be left to the discretion of the surgeon, and a few observations will point out the circumstances which are to govern his decision.

When any accidental occurrence, as a blow, or the health becoming suddenly much disturbed, excites those parts which had been for a long time in an indolent state, to a state of active inflammation, and matter suddenly forms, producing tension and pain; or if the abscess be situated in the vicinity of a bone, as the tibia or ulna, it undoubtedly should be opened as soon as possible.

But if none of these circumstances occur, if there be neither tension nor pain, although the whole skin covering the abscess be discoloured, and the fluctuation be evident and distinct, and the whole tumour reduced to a state of softness and flaccidity, I believe it is of very little consequence whether a puncture be made or not. Still, however, when part of the tumour remains hard, although matter has evidently formed on its surface, and the skin be much discoloured, unattended by pain, it is better to abstain from using the lancet.

The reasons urged in favour of indiscriminately opening these tumours as soon as matter is discernible, are, that if you do not it will discharge itself by several ulcerated apertures, which will coalesce and form one large ulcer; that you will expedite the cure, and prevent the unsightly scar which, generally, is the relic of a large scrophulous ulcer. On the other hand, it is urged, that, if you open them indiscriminately, you will often open where the matter would have been absorbed, and make a wound where no wound would have occurred; and that you neither prevent ulceration nor an unsightly scar, as the lips of the wound are often attacked with herpatic ulceration.

SCROPHULOUS ULCERS.

When a scrophulous abscess bursts, or is opened, the aperture gradually enlarging, forms what is called a scrophulous ulcer, which Mr. Russell thus describes :—" The margins are smooth, obtuse, and overlap the ulcer; they are of a purple colour, and rather hard and tumid. The surface of the sore is of a light red colour ; the granulations are flabby and indistinct, and the aspect of a peculiar kind, which cannot be described. The discharge is thin, slightly ropy, and copious, with curdy-looking flakes. The pain is inconsiderable." The only characteristics, however, of a scrophulous ulcer, that can be depended on, are, its occurring after a scrophulous abscess, the peculiar dull red, or purple colour of its edges, its remaining indolent for a great length of time, neither increasing nor diminishing in size, and its being attended by the peculiar state of health which has been already described.

I know of no specific remedy for a scrophulous ulcer, nor can we rationally hope to find one for any local disease depending upon a peculiar state of the general health.

It often happens, however, that, when the abscess which produced the ulcer was very large, the discharge from the ulcer continues very pro-

fuse; that when we introduce a probe under its edge, we ascertain that the dimensions of the abscess remain undiminished; and that its internal surface is the source of the discharge. In this case, it has been proposed to inject the cavity with some stimulating wash; and of late the solution of sulphate of zinc has been particularly recommended. Indeed, some surgeons advise injecting the abscess as soon as it is deprived of its contents. This practice, however, pursued indiscriminately, is not only useless but hurtful. When the health has been bad, I have known the ulcer rendered painful and irritable by this mode of practice, and the discharge much increased. Indeed, I may safely assert, that in the abscesses which form in the neck it is seldom admissible; and that it is so, only in those abscesses which form over the sternum, ribs, or some other parts of the body, and in those only when they are in a very indolent condition, and when the disordered state of health is removed. When there is diseased bone at the bottom I would entirely object to the practice.

When the ulcer is not connected with the circumstances mentioned above, it is frequently prevented from healing by its overlapping edges being in a diseased state, as indicated by their purple colour; and when this is the case, by destroying their edges with the kali perum, we may often induce them to heal very readily.

Of all the variety of local applications, I know of none that agree with scrophulous ulcers better than those that are slightly astringent; and what is called the diluted citron ointment is, in my opinion, the best. Under certain circumstances it may be combined with a small proportion of the Ceratum Resinæ, or of the ungt. Zinci. Sometimes, however, the different preparations of lead, and indeed all other local applications, appear to be useful, while in other cases they evidently produce no effect at all.

The following cases will more fully illustrate the preceding points:—

A young lady, aged seventeen, in the month of February, 1818, applied to me with a large swelling on the right side of her neck; there were also several smaller ones. They had existed for about two years, during which time she had been under several medical men, and by their direction had made use of various local applications, and taken internally various medicines. Her health at this time was very delicate. She was subject to frequent flushings, and occasional head-ach; her appetite was bad, her bowels generally much confined, and she complained very much of pain in her hips and loins. The catamenia had never appeared.

Her hair and eyes were dark, and her complexion was rather dark than fair; but still she

had all the physiognomonic signs of a scrophulous habit, which have been described in the first part of this Essay. At the time she applied to me the swellings were in an increasing state; and the largest was tender on pressure. On this account I had four leeches applied to it, and ordered the parts to be bathed four times a day with a cooling wash. I ordered her to take the compound calomel pill every other night, and to keep her bowels open daily; for which purpose I ordered her some of pilula aloes cum myrrha. During the first six weeks that she pursued this course there was no perceptible alteration in the tumours; but at the end of the period the catamenia appeared, and she felt stronger and better altogether.

From this time her whole health continued to improve, and the swellings gradually subsided: and when I saw her six months after, the only vestige was a small lump, of the size of a pea, where the large ones had been situated. At first, when I saw this tumour it was of the size of a hen's egg, and was situated so immediately over the carotid artery, that its pulsations were as distinctly felt through it, as in a case of aneurism; and indeed a medical friend to whom I shewed it, at first supposed it to be one.

A young lady, about sixteen years old, of dark hair and eyes, and of very good complexion, had

had the glands of the right side of her neck indolently enlarged, for between three and four years. At the time I saw her, which was in November, 1817, they were increasing in size, and two or three of them had coalesced, and formed one large tumour, on the surface of which there was evidently some fluid, although the skin covering it was not at all discoloured. It was very little painful. Her health was very delicate. She was very susceptible of cold; and her bowels were very costive, being relieved only once in two or three days. Her appetite was bad, and she seldom made any other meal than dinner. She had been under several medical men, and consequently had tried various plans of treatment: while under one, she had taken large quantities of muriatic acid in the infusion of roses. When she came under my care, I prescribed for her half a grain of calomel, and five grains of the pilula aloes e myrrha, every night, as her bowels were so constipated; and ordered her to bathe her neck with salt and water three or four times a day. I also directed her to be particularly attentive to her diet; to avoid all stimulating food, and to take her meals at regular intervals.

When she had pursued the plan of treatment laid down, for about a month, her health was wonderfully amended, her appetite much improved, and her bowels much more easily regu-

lated. Her rest too, which before this was always disturbed, was now tranquil and refreshing.

As the swellings, however, were much in the same state, and her health greatly improved, I ordered a more stimulating application to be made to them, viz. a strong solution of muriate of ammonia in vinegar. She continued this application until an eruption was produced all over the surface of the tumour, and then a bread and water poultice was substituted.

This plan of treatment was pursued till the following May; the pill, however, being taken only every other night. At this time the swellings in her neck were scarcely to be felt, and her general health was extremely good.

The case of a little boy, aged five years, of a fair complexion, hazel eyes, and brown hair, who had scrophulous abscesses on several parts of the body, and immense enlargement of the glands of his neck, tumid belly, pallid countenance, extreme debility and emaciation, and indeed every symptom of being highly scrophulous. He had been in this state for nearly a twelvemonth. His bowels were, at the time he was brought to me, which was in April, 1818, in a very irregular state, being sometimes very confined, at others very much purged; and the colour of the fæces was alternately very dark and very light. His appetite, however, was generally voracious.

One abscess had formed in his neck, which had burst and discharged its contents. Another had formed on the inside of the tibia, about its middle, which I opened, as soon as I clearly ascertained that there was matter, and about an ounce of serous fluid, mixed with a curdy matter and a little pus, was discharged through the opening; and on examining the bottom of the abscess with a probe, I discovered that the bone was bare. The lymphatic glands of the opposite groin was diseased; indeed, two of them had suppurated.

This case had so progressively got from better to worse, and the mesenteric disease was so evident, that the medical man who had attended it from the first, gave it up as irremediable, and indeed the parents of the child almost despaired of seeing him recover. I am happy, however, to say, that when I saw him last, he was what may be called quite well; the mesenteric disease had subsided, all the abscesses had healed, although a small piece of bone came away from the tibia; his whole appearance had altered, and no vestige of the disease remained, except a trifling enlargement of the glands of his neck, and they were gradually subsiding.

No specific remedies were made use of in this case: he was put upon the treatment described in the first part of this Essay, viz. attention to his diet, and to his stomach and bowels, and soothing applications to the local diseases. All the medi-

cines he took were half a grain of calomel, and five grains of rhubarb every other night, with an occasional purge, and these he continued till the end of October.

The case of a little boy, aged ten, of dark hair and eyes, and of rather dark complexion, who had the glands of his neck enlarged for nearly two years. I first saw him in April, 1818, when, besides these swellings, he had several abscesses on his right arm. One was situated on the oleranon, or rather between it and the inner condyle of the humerus, which had broken, and at the bottom the ulna was bare; the others were in the course of the lymphatics, a little above the condyle, and were then entire, though they soon broke by ulceration, and discharged a semi-purulent matter, mixed with portions of a curd-like substance. The opening subsequently enlarged, and formed two large scrophulous ulcers. His health was not particularly bad, though he was in what his mother called a delicate state of health; he had a little hacking cough, his bowels were irregular, his appetite bad, and as the evening advanced, he always became rather hot and feverish.

This boy, by pursuing the treatment adopted in the preceding cases, became quite well in health, and the only relic of the disease is a small part of one of the ulcers on the arm, being unhealed. His diet was principally composed of milk.

A little boy, six years old, of fair complexion,

blue eyes and light hair, was, in September, 1816, brought to me with abscesses on various parts of his body; he had a bad cough and difficult respiration, tumid belly, and pallid countenance; his bowels were too open, and had been for some time irregular, and what was discharged from them was very offensive and dark coloured; but his appetite was very good. He had every night a regular attack of hectic.

As the bowels were too open, and their secretions so bad, being almost black, four grains of the hydrargyrus cum cretâ were given him every night, and continued for the first fortnight; but afterwards only every other night. He was put upon milk diet, being allowed a pint a day; and in every respect he was treated upon the principles which I have laid down. It was astonishing to witness how much he improved during the first six weeks, under this treatment; but after this the bowels again became disordered, and the hectic and all the bad symptoms returned. He lingered in this state, getting more and more reduced, for about two months, and then died.

Upon examining his body the lungs were found very much diseased, and full of tubercles, and the mesenteric glands were also very much diseased. Some of them were in a state of suppuration, no vestige of the gland remaining; others were converted into a cheesy sort of substance; some were

much enlarged, with a deposition of soft cheesy matter in their centre, while others were simply enlarged.

Of course, when such disease in the lungs and mesentery, as has now been described, takes place, there can be but little chance of benefitting our patient by any means we may employ. For when a number of vomicæ exist in the lungs and mesentery, such general irritation must necessarily be induced, as to effectually prevent any treatment we might adopt from having any beneficial influence upon the disordered functions of the body. Still, however, a great deal may be done to moderate the disorder of the system, by guarding against any additional irritation being propagated through the medium of the digestive organs; and this is to be effected by attention to diet, and by restoring, or preserving the regular action of the bowels.

A little girl, of very good complexion, neither fair nor dark, had the glands of her neck enlarged to a considerable degree. She was, therefore, placed under the care of a surgeon, and was his patient for several months. He alternately gave her muriatic acid, and soda; each of which she continued for some time, without the least subsidence in the glands of the neck. She, therefore, had a tea spoonful of steel wine given her three times a day, which she continued taking for about

six weeks; and during this time she evidently got worse in health, and the swellings increased. The plan of treatment was now entirely changed: she did nothing but attend to her diet, and take half a grain of calomel, and five grains of rhubarb, every other night, and occasionally a purge. Under this treatment her health was quite restored, and the glands of her neck, which were enlarged, gradually subsided. She made use of no local application, except bathing her neck with a cooling wash three or four times a day, and this she had done before she commenced this plan of constitutional treatment.

A little girl, about nine years old, of fair complexion, and of a highly scrophulous habit, was brought to me at the beginning of the year, 1818, with the glands of the neck very much enlarged, and with a continual discharge of blood and matter from her left ear. The glands of her neck had been enlarged for about three years; but the abscess in her ear had lately occurred. She had always, except when an infant, been a very delicate child; and at different times had discharged a great many ascarides.

She was put on the treatment I have recommended, and under it her health very much improved, and the glands of her neck diminished in size. Still, however, the discharge from her ear continued, and as she complained of its paining

her very much, I inserted a seton immediately below the mastoid process of the temporal bone. The change produced by this was so remarkable, that it had not been established for above a fortnight before all the discharge ceased, and after then she hardly felt any pain in it; besides this, the glands of the neck more rapidly decreased; but whether this was owing to any direct influence of the seton upon them, or to the removal of the pain in the ear, which was necessarily a source of general irritation, I will not pretend to say.

A young gentleman, between sixteen and seventeen years old, was sent to me in November, 1815, with an abscess on his sternum. As there was tension, and as I was afraid of the matter making its way to the bone, I let it out, and it proved to be about four ounces of a whey-like fluid, mixed with pieces of a curd-like matter. The tumour on the sternum had existed, of about the size of a walnut, for nearly four months, and in an indolent state, till about a month before I saw him, and he had been for a much longer time in a very delicate state of health, for which he had been under the care of a physician, who had prescribed for him bark and soda, to be taken three times a day, but from this he derived no advantage.

When I saw him his bowels were obstinately costive, and he informed me that they had been in that state for a considerable time. I therefore

made him discontinue the use of the bark, but ordered him to take a grain of calomel every other night, and opening medicine when necessary, and to be particularly attentive to his diet. At first I injected the abscess with a solution of sulphate of copper every other day, as this seemed to be one of those cases for which astringent injections are recommended; but after using it for three months without any benefit, I discontinued its use, and ordered a bread and water poultice to be applied. After continuing this plan of treatment for about three months longer he became well in health, and the abscess healed, and no similar disease subsequently made its appearance in any other part of his body.

The brother of the patient whose case is related above, was at the same time suffering severely from scrophulous disease. He had disease of the glands of his neck, of the right wrist, and of the metacarpal joint of the fore finger. From all of which, by the same treatment, he completely recovered.

The case of a little boy, between eight and nine years old, who had several abscesses form on his right side, about the angles of the ribs; and at the same time the glands of his neck were enlarged. He had had a very delicate state of health for some time preceding the formation of the first

abscess, but subsequently, by pursuing the plan of treatment I have laid down, his health much improved. All the abscesses were opened and all healed. The first, however, was allowed to exist for some time without being opened, the consequence of which was, that the rib on which it had formed was laid bare, and a small exfoliation took place. The others were opened earlier, and the ribs were not exposed.

The next is a somewhat similar case:—A little boy, between eight and nine years old, had the glands of his neck much enlarged, and an abscess formed immediately over the mastoid process of the left temporal bone. This was allowed to continue unopened for nearly two months, and then the bone was found to be bare, and the ulcer which formed was, in consequence, much more difficult to heal, it however did at last, though not until the exposed portion of bone exfoliated.

I have observed generally, that when a scrophulous abscess is formed over a bone, and not opened immediately, the bone will become exposed, and that, when it is opened as soon as formed, this will not be found to be the case. I therefore presume, that the affection of the bone is not the effect of the scrophulous diathesis, but an accidental occurrence, produced by the ulceration of the soft parts in contact with the bone.

It is this circumstance which has made me recommend the opening an abscess, so situated, directly it has formed.

When a scrophulous ulcer, which is connected with a diseased bone, heals, the scar is always particularly unsightly, as the skin becomes drawn in, and firmly attached to the bone, so as to form a complete pit, or hollow.

I might here mention many cases, proving the difficulty which often attends the healing a scrophulous ulcer; but I shall content myself with relating only a few particular circumstances connected with them, as it is a fact so undisputed, and well known.

An African lad, between sixteen and seventeen years old, had a scrophulous abscess form on the right side of his neck, which was opened, and its contents evacuated; but still a considerable tumour remained. The edges of the opening were attacked with herpetic ulceration, and a large ulcer formed, which for several months resisted every attempt to heal it, although every variety of local application was tried, as well as the whole class of anti-scrophulous medicines. His health was extremely bad during the whole of this period; but as it improved the ulcer readily healed under the most simple applications.

The next is a very similar case, the subject of it was also an African, a patient in St. Bartho-

lomew's Hospital. He had a large scrophulous abscess form in the groin, unconnected with any venereal affection; this ulcerated in the same manner as in the former case, and likewise for several months resisted every attempt to heal it; but at last, as his health improved, healed under the most simple applications.

We often have, as I have already stated, great difficulty in healing scrophulous ulcers, on account of the edges being irregular and overlapping, and owing to the gland remaining much enlarged at the bottom. In these cases we may often immediately produce a disposition in the ulcer to heal, by using the kali purum pretty liberally, so as to destroy the edges and the surface of the enlarged gland at the bottom of the ulcer. Sometimes too, when the gland has become converted into what may be called a piece of scrophulous matter, by destroying the edges of the opening we give this an opportunity to come away in the poultice, or the absorbents being excited take it up, and the ulcer will often heal as if it possessed no specific characters.

During the latter part of the second year that I was house surgeon to St. Bartholomew's Hospital, I was asked to see a case of this kind by Dr. Haworth. It was the case of a young man who had had a large scrophulous abscess form on the right side of the neck, which had left an indolent ulcer with overlapping edges. The gland at

the bottom of it, and which produced the abscess, was still much enlarged, as were several other glands in his neck. I applied the kali purum to the edges, and also to the surface of the gland, at the bottom of the ulcer, and produced a slough, which coming away left a healthy ulcer, that readily healed; and also the glands of the neck rapidly decreased in size.

I have adopted this practice with equal success in many other instances, where the parts have remained in an indolent state, although the health of the patient has been much improved.

I have already alluded to the unsightly appearance of the scar which is left by the healing of a scrophulous ulcer; and may here add, that this is always the fault of the surgeon; for if the diseased edges are destroyed, the scar will be precisely like that of a simple ulcer, or common wound.

It is submitted, that the preceding cases fully prove the principles that have been laid down, and that the plan of treatment which I have recommended is sufficient, at least, to cure the worst cases of this form of the disease. They also shew, that this plan of treatment will readily cure the disease, not only when the common stimulating plan of treatment has entirely failed, but also when the disease has been continually getting worse under a different plan.

OF SCROPHULOUS AFFECTION OF THE FEMALE BREASTS.

It is by no means uncommon to have scrophulous affection of the breasts in young women, both before and after the period of menstruation. This affection generally commences by the formation of a hard moveable lump in some part of the breast. This gradually increases in size, and coalesces with the surrounding parts, which become tender, inflame, and form successive abscesses, which leave small ulcerated openings; and these are sometimes very difficult to heal.

It also occasionally happens, that the whole skin of the under part of the breast, where these abscesses are generally seated, becomes discoloured and diseased; that the swelling increases; and that a considerable degree of constitutional irritation ensues, which is seldom relieved, more than in a very slight degree, by either general or local bleeding. Under these circumstances I have found the insertion of a seton highly serviceable.

The following case will illustrate these circumstances:—

A young woman, aged twenty, had a small hard lump form in the under part of her breast, which gradually enlarged till it was lost in the surrounding parts; which became painful, inflamed, and formed an abscess, which discharged about three ounces of a scrophulous matter. A small ulcer was left; and the parts, which were covered with a bread and water poultice, became in a quiet state. Her health had been for many months in an indifferent state, and her catamenia were suppressed. The constitutional treatment that was adopted, consisted principally in keeping her bowels open, and in attention to her diet.

She, however, did not materially improve in health; and abscesses continued to form successively: the swelling of the breast rather increased, and was attended with great pain. I therefore took from her arm twelve ounces of blood, and for the first two days the pain was less, and her pulse more tranquil; but the pain again returning, I bled her again to the same extent, but without benefit. Leeches were also applied repeatedly to her breast, but with the same success. She now became very impatient; I therefore made a seton under the breast, at a little distance from it, and continued the treatment that had been previously adopted. From this

period a complete change appeared to take place in her, as both her health and her breast began rapidly to amend; so that in less than two months the breast was reduced to its natural size; her catamenia re-appeared, and her health was very good: and in less than another month I removed the seton, as the ulcer had healed, and only a slight hardness remained.

In another case, which had existed for nearly two years, a seton proved of very great benefit; for after its insertion, although it did not at once remove the disease, no fresh inflammation nor abscess ensued. Generally, however, in these cases we need not proceed to the use of this remedy, as they go on extremely well under what may be called common treatment, viz. attention to the general health and soothing local applications.

There is, however, another form of scrophulous affection of the breast, in which very similar means appear to produce equal benefit, both to the general health and to the local disease. The following observations will illustrate this point:—

It sometimes happens, that, in adult age, the whole breast will enlarge, and become of firmer texture than natural, the skin and other superincumbent parts being soft, and unconnected with the subjacent gland. It will remain in this state often for many months, or even years, only gradually, and almost imperceptibly, enlarging, and

unattended with pain, or even tenderness on pressure; till suddenly the surrounding parts inflame, and become consolidated with the enlarged gland. At this stage the tumour will often become very painful, and a great degree of constitutional disturbance arise. The bowels are generally torpid, the tongue pallid, and of an unhealthy appearance, and the pulse rapid, though often very weak. The breast at length shews some disposition to suppurate; but this is, in general, very partial, only a small abscess forming on some part of its surface, producing in its formation great pain, though perhaps not containing above a tea-spoonful of a curdy whey-like matter, which is generally discharged through a very small aperture. This, however, generally gives a great deal of relief to the patient. A slight discharge will often continue for a few weeks, till the aperture closes; when a new abscess will form, attended by the same symptoms, and pursuing the same course. In this manner abscesses will continue to form successively for several months, until the tumour gradually diminishing, the whole breast wastes away.

During the formation of these abscesses, if we trace the surface of the breast with our finger, it often appears nodulated, and particularly at those parts where the super-incumbent integuments have not become firmly attached to the subjacent gland; but sometimes it appears as if there are

several soft places, or pits, in the surface of the tumour, into which we can readily introduce the top of the finger.

During the progress of this disease, it is very common for abscesses to form in the course of the absorbents passing to the axilla, and in the glands of the axilla itself, and even before any abscess has formed in the breast; but these are of no consequence, and always cease with the original disease.

I have known instances of this disease continuing for several years, when improperly treated, or when proper constitutional treatment has not been employed, producing great debility, and keeping up horrible derangement of the general health. When, however, a judicious plan of treatment is had recourse to in an early stage of this disease, it will generally subside in a few months, without the formation of matter; and even when abscesses have formed, we may very much diminish the mischief which would otherwise follow, and conduct it to a more speedy termination.

The constitutional treatment consists in attention to diet, and to the state of the bowels; and when the constitutional disturbance is great, with the pulse that has been described, I have found occasional doses of some neutral salt, with small doses of hyoscyamus, extremely useful. Tonics and stimuli I feel convinced are generally injurious;

and that it is not by such means we must attempt to give strength to our patient, but by regulating the quantity and quality of the food according to the condition and powers of the stomach.

In the local treatment, the application of poultices is indispensable; and I believe the decoctions of hemlock, or poppies, are useful adjuncts. Leeches may be applied according to circumstances; for, though in the other form of this disease, or when a lump, or distinct lumps, form in the substance of the breast, which is otherwise healthy, they seldom do good, in this species of the disease they often afford considerable relief. They must not, however, be applied in such numbers as to weaken the patient.

We may sometimes very much expedite the reduction of the tumour, in those cases in which abscesses have formed, by enlarging the aperture through which the matter has been discharged, by the application of the kali purum, so as to form an issue. This, of course, is to be kept open, by occasionally touching the edges with caustic, till the tumour has nearly subsided, or till any sinuses that may have existed have entirely healed. I had a patient, aged thirty-four, who had her right breast in this state for between three and four years, which perfectly recovered in less than nine months. In this case there was great hardness, and there were several sinuses, but all healed after the establishment of the issue.

I have met with two very bad cases of this disease. In one patient, who was aged thirty-six, it was the left breast that was diseased; in the other, who was aged twenty-five, it was the right breast. In the former case the whole gland was enlarged and exceedingly hard, its surface uneven, and the common integuments covering the breast, soft and healthy, except about the nipple, where several small abscesses had formed. The swelling commenced at the upper part of the breast, where a small hard tumour had existed for more than a twelvemonth. There was very little pain or tenderness in the swelling, except during the formation of the abscesses; but there was during the whole time a quick weak pulse and a white tongue. The only medicines that appeared to do any good were such as acted gently on the bowels, and small doses of hyoscyamus. For several months all the usual means for discussing these kind of enlargements were made use of without any benefit; but soon after an issue was established, the swelling began to diminish; and in two months time almost wholly subsided. I should observe, that the issue appeared to benefit the general health; at least, soon after it was establised, the health rapidly improved. In this case the diseased breast, which has still a little hardness where the matter formed, is considerably smaller than the opposite and healthy one.

The other case is in every important respect similar to the former, and went on in the same course. The only difference is, that in this case the texture of the enlarged and diseased breast was softer than in the former. It was more than as large again as the healthy one.

In some cases of scrophulous disease of the breasts, a portion of the gland will be converted into complete scrophulous matter, and come away after the suppuration, in the same manner as in the same affection of the lymphatic glands. I have lately met with a case of this kind. It occurred in a woman about the age of forty. There had been a lump in the under part of the right breast for nearly five years, which at length suppurated, and a large mass of scrophulous matter projected through the opening in the abscess. Indeed, the contents of the abscess principally consisted of this, as there was very little matter besides; and when it came away there was no remnant of the tumour.

It is of considerable importance to attend to this form of the disease, as I believe it is sometimes mistaken by surgeons who are not conversant with it, for a schirrous affection. Indeed, I feel convinced that I have seen the breast amputated for this disease, upon the supposition that it has been cancer. I do not state this from mere conjecture, but from the appearances of the diseased gland after it has been removed.

This disease is the more likely to be mistaken for a cancerous tumour, as during its progress it is very similar. They both often exist for a long time without much increasing; and when they are evidently increasing it is generally very gradually. They are both, too, attended by very slight pain till suppuration or ulceration commences; and in both the skin over some part of the tumour will often remain discoloured for a long period before suppuration, or ulceration, commences. At this stage, however, the nature of the disease may be accurately ascertained; for if it be true cancer the tumour will ulcerate, or very perceptibly increase in size; and if it be scrophula the tumour will suppurate, or very perceptibly diminish in size.

There are, however, it is true, some other malignant diseases with which it may be confounded, as their progress is somewhat similar, and they terminate in abscess. But an observing surgeon will, in general, be able to form an accurate prognosis, by attending to the nature of the matter discharged, and to the co-existing state of health.

ON DISEASE OF THE TESTICLE.

The testicles are certainly subject to scrophula, both in the child and in the adult. I have at present under my care a child, three years and a half old, with his right testicle affected. When he was brought to me the whole scrotum was distended with matter, and appeared like a scrophulous abscess in any other part of the body, and the skin was so thin you might see the matter through it. A poultice was applied, and in a few days the abscess burst; and the aperture soon enlarged so much, that full half of the gland projected through the scrotum, and was converted into a mass of yellow scrophulous matter, which a few days after separated, leaving the remainder of the gland enlarged and hardened. This is, however, rapidly diminishing, and seems likely to entirely waste away. This is the only case in which I ever saw the testicle of a child affected with this disease, and I am not able to describe its progress, as the abscess had formed before I saw it.

In the adult when the testes are first attacked with this disease, they gradually become enlarged, and are generally rather softer than natural. As they enlarge they generally preserve their natural figure, and seldom increase to any very large size. This stage of the disease is not usually attended by much pain, nor even tenderness on pressure. The progress of the disease in the testis is very similar to the same affection of the absorbent glands. Dr. Bailie, in his Morbid Anatomy, states, that " the structure of a true scrophulous testicle resembles exactly that of a scrophulous absorbent gland."

The enlargement is of two kinds: first, it is of a parenchymatous matter· it is owing to interstitial deposition, or simple expansion of the natural structure of the gland. In this state it is common for a small abscess, containing a curdy matter, to form in the substance of the gland, and to exist for an indefinite time without the least apparent alteration in the membranes, or even in the surface of the testis. The substance too of the gland, between the different abscesses, very much preserves its natural density and appearance. The matter is usually contained in a kind of cyst, though sometimes the cyst is not perfect.

In the second kind of scrophulous enlargement of the testicle, the natural structure of the gland becomes entirely absorbed, and a matter, similar

to what we see in the cancelli of bones affected with this disease, of the consistence of cheese, and of a yellowish-white, or greenish-yellow colour, is deposited in its place. This new matter is sometimes made up of several distinct masses, and each mass appears to be surrounded by a cyst. The coats of the testicle in this species of enlargement, as well as in the first, continue for some time healthy and unaltered.

There are two excellent specimens of these two species of scrophulous enlargement of the testicles in Mr. Abernethy's Museum. In one the whole of the testes, except a little of its surface, is converted into scrophulous matter of the consistence of cheese, and of a yellowish-white colour. It is, however, made up of three or four distinct masses, each surrounded by its cyst. It is considerably larger than the natural size of the testis. The coats of the gland are not diseased; neither had the scrotum become affected.

In the other specimen the disease is of the other form, and is also very similar to what we often observe in the lymphatic glands. The whole gland is much enlarged, and the texture denser than natural, but still fleshy. There are several small abscesses, containing a curdy purulent matter, formed in different parts of it, and each of these appears to have a tolerably perfect cyst. None of them communicate with the surface of

the testicle; neither are its coats nor the scrotum affected.

Both these forms of the disease are common; but these are particularly perfect specimens. They were procured from bodies brought into the dissecting-rooms of St. Bartholomew's Hospital, and kindly shewn to me by Mr. Stanley.

In neither of these forms of the disease, so long as the coats of the testicle remain in their natural state, is the pain very severe; in the latter, however, the pain is greatest. When, however, the coats of the testicle, the scrotum, and other parts inflame, and suppuration commences, the pain is sometimes very great, as in a similar state of the breasts. In both forms of the disease, when inflammation takes place, the testicle and scrotum become consolidated, or they constitute, as it were, one substance. When the enlargement is of the former species it now feels hard, and is not very tender to the touch: in the latter species it is softer and more tender. In this latter species too, at this stage, the small abscesses will be making their way to the surface; and if we trace the surface of the testes with our finger, we find soft places, or pits, with hardened edges, into which we can introduce the point of the finger. When this is the case, it often happens that one or more of the abscesses will soon discharge themselves externally, and if we introduce a probe at

the opening, it will readily pass into the substance of the gland. It sometimes, however, happens, that the matter will be absorbed, and the enlarged testicle be gradually reduced to its natural size, or keep dwindling away till the whole gland is absorbed. These cases are not very uncommon; and sometimes both of the testicles will gradually disappear as the scrophulous disease subsides.

It sometimes too occurs, that the enlargement of the testicle having existed for some time, a superficial abscess forms, as in the lymphatic glands; and that after this the testes gradually subsides to its natural size, as if no abscess had formed. Sometimes, however, several sinuses are formed, which continue to discharge a scrophulous matter, and are very difficult to heal.

When the disease is of the first species, or when the enlargement is produced by the conversion of the testis into a mass of scrophulous matter, abscesses form between it and the surface of the scrotum, and discharge themselves by several small openings, which coalesce and form one large ulcer, through which the newly formed matter gradually comes away, sometimes in one large mass, though oftener in several smaller portions, like sloughs. When, however, only part of the testis is converted into this matter, the separation of it from the remainder of the gland is often very tedious, and it will sometimes project like a large

slough through the wound for months without coming away. I knew a case of this kind, in which, the nature of the disease not being understood, castration was performed. When, however, the matter has come away, the wound generally heals readily, as in the case of the child I have related.

TREATMENT.

In the first stage of the disease, or when there is merely enlargement, the treatment is very simple. It consists in taking off the increased weight of the testicle, by means of a suspensory, and in the application of a bread poultice, or cooling washes.

In the second stage, or when the surrounding parts are inflamed, and suppuration is taking place, the occasional application of leeches is highly useful; but we must be careful not to weaken our patient by abstracting too much blood at a time. The parts should also be kept constantly covered with a bread and water poultice. These are the local measures we are principally to rely on; but in the constitutional treatment, it is necessary, in this stage of the complaint, to make some variation, as there is usually an increase of pain, and more disturbance of the health, attended by a weak and hurried pulse. Under

these circumstances, however, the only medicines from which I have ever been able to derive any real benefit are those of the sedative class, combined with mild purgatives. It can hardly be needful for me to observe, that this disease may exist with a state of health, in which it may be necessary for us to adopt other measures, applicable to the existing circumstances. The removal of this state of the health is, however, indispensable; for so long as it exists, no local means that we can employ will have the least beneficial effect on the local disease, as the following case will sufficiently prove:—

It is the case of a young man, aged twenty-three, who was a patient in St. Bartholomew's Hospital. The disease was in his left testicle, which was about three times its natural size. It had been gradually enlarging for three months before his admission into the hospital, but during this time there was but little pain in it; when, however, he came into the hospital, it was more painful and tender to the touch, and he complained of pain in his loins. He was very much out of health, and had a weak and rapid pulse. The scrotum now became inflamed, and attached to the outer surface of the gland; and matter formed at this point. At this period leeches, poultices, and fomentations, were had recourse to but without producing any benefit; and as the ten-

sion and pain were great, a puncture was made at the most prominent point of swelling, and a desert spoonful of a sero-purulent matter discharged. This afforded some relief; but as the enlargement did not subside, as there was still pain, and the wound continued discharging, a seton was inserted at the upper part of the scrotum. This, however, not only did no good, but produced great swelling and inflammation of the whole scrotum, so that it was obliged to be taken out, after it had been in for about a month. All the various means that have been recommended for the discussion of enlargements of the testicles, were now tried without any good effect; and as the health of the patient was getting worse, he left the hospital and went into the country. A few months after this, he called on me with his health much improved; and the testicle was almost of its natural size, entirely free from pain, and the wound perfectly healed. The only remedies he made use of were, bread and water poultices, and medicines to keep his bowels regular. Not long after this, however, the gland again swelled, but soon subsided, by the use of the same means; and since that he has remained well, a space of nearly three years. I saw him lately in good health; and he now gains his living by driving a hackney coach.

In this case bougies were introduced; but there was no particular affection of the urethra. Mer-

curial frictions were also used, but with evident mischief to the general health, and with no benefit to the disease.

I could relate many other cases to prove the dependence of the disease in this stage, on the general health; and that the measures we should adopt for its cure are of the most mild and soothing kind; but this case sufficiently proves these points, as well as the mischief of different and more violent means. In cases of this description, where matter has evidently formed in several places, and the different parts have even become, as it were, consolidated, by the use of these means, the disease will often wholly subside, without the production of any wound, and leave the scrotum and other parts very much in their natural state of connection. In cases, however, where the whole, or only part of the testis has been converted into a mass of cheesy matter, which has come away by an external wound; or when abscesses have formed in the body of the gland, and discharged themselves externally, producing a diseased state of the skin of the scrotum, and sinuses difficult to heal, which constitutes the third stage of this disease, no such state of reparation can take place. Under these circumstances, the preservation of the gland being out of the question, it is clear that our principal object ought to be to cure the local disease as expeditiously as possible; and thus remove a source of

constant irritation to the constitution. For this purpose, we seldom derive any material benefit from fomentations and poultices, or from any dressings we may apply to the parts; indeed, under these applications, the disease will generally go on for many months without the slightest improvement; but if we apply the kali purum, so as to enlarge the orifices of the sinuses, and to destroy the diseased part of the scrotum, I am convinced the sinuses and wounds will speedily heal, and the enlargement of the gland even rapidly subside.

The reduction of the size of the gland, as I have before observed, does not always cease at the point where the enlargement commenced, but sometimes proceeds till the whole, or nearly the whole, of the gland be absorbed. The following case will more clearly illustrate the preceding point. It occurred in a young man, aged twenty-six. His right testicle had been enlarging for between four and five years, without any evident cause, and without any attack of acute inflammation; nor had there been much pain during any part of this time. At length, however, it became more painful, more active inflammation arose, and abscess after abscess formed, leaving sinuses and ulcers, which showed no disposition to heal. During this time he was under three different surgeons, all of whom had treated it as venereal, at least they had given him large quantities of

mercury, but without producing the least benefit to the disease. When he applied to me, which was in the autumn of 1819, it was twenty-three months since the first abscess had formed, and there were then several sinuses, and two ulcers of the size of a sixpence, and the testicle was much enlarged. As he was very unwell and extremely weak, and the improvement of his health was of the first importance, I merely recommended soothing applications and simple dressings to the local disease. As soon, however, as his health was better, the local disease being still in the same state, I applied the kali purum to the diseased parts of the scrotum, and to the orifices of the sinuses, so as to produce a large slough; which came away in a few days, bringing with it a large quantity of scrophulous matter. The wound was now dressed with simple dressings during the day, and at night a poultice was applied. By pursuing this treatment, and by occasionally using the kali purum, in little more than three months the whole of the sinuses, and the wound made by the first application of the kali purum, had entirely healed. The enlargement of the testicle too, had much subsided, and now is quite free from disease; but much smaller than the opposite one.

The preceding cases, which I have related, exhibit this disease in its worst and most advanced

stage—a stage at which I believe it would never, or hardly ever, arrive, if treated at an early stage in the manner I have recommended, viz., by attention to the general health, and by adopting only such local means as tend to prevent and tranquillize irritation. That this enlargement of the testicle, even when the gland has attained a very large size, is reducible by these means, my own practice sufficiently convinces me; and I could relate many cases to prove it; but, as they are merely illustrative of this single fact, I will not so unnecessarily occupy the attention of my reader.

That, also, many of the chronic enlargements of the testicles, which we so often meet with in practice, are of a scrophulous nature, I am fully convinced; and I am equally convinced that the generality of such cases are certainly curable: and I have not adopted this opinion hastily, nor unadvisedly, and not only from cases that have occurred in my own practice, but also from many cases of the same kind that I have had an opportunity of witnessing in Mr. Abernethy's practice. I will briefly allude to a very bad case of this description, which perfectly recovered by making use of only the most simple means: it occurred in Mr. Abernethy's practice. The patient was a medical man, about twenty-five years of age. When I first saw him both his testicles were very

much enlarged, being at least four or five times their natural size. It was more than a year since they began to enlarge. They had a fleshy feel, and were painful and tender to the touch. He was in a bad state of health; his pulse was weak and rapid, and his tongue white; and he complained of great weakness: he had also an excessive degree of nervous irritability.

I could relate many other cases of the same nature, in which only one testicle has been enlarged, but this one is sufficient to prove the point for which I am contending, viz., that sarcocele, or a fleshy enlargement of the testicle, may exist, and be continually getting worse for a long time, and yet in the end perfectly recover.

I am entirely aware that in offering this opinion I am differing from very high authority. I am fully aware that Mr. Pott considered all cases of chronic fleshy enlargement of the testicles, which were attended by a bad state of health, or which did not readily yield to the discutient remedies usually employed, as requiring early castration; and I certainly should not have presumed publicly to question the opinion of that great and excellent surgeon, if I had not been led to a contrary opinion by numerous and incontestible facts. If any additional evidence were wanting to prove the correctness of this opinion, it might be derived from the fact, that among the

numerous cases of diseased testicles, which occurred in Mr. Abernethy's practice, during my long and active attendance at St. Bartholomew's Hospital, only one required castration; and this was a case of fungus hæmatodes. Let it not, however, be supposed, that I mean to contend that the testes, unlike every other part of the body, are not subject to various malignant diseases; for all I contend for is, that the fleshy enlargements of the testicles are frequently of a scrophulous nature, and certainly generally curable.

The epididymis is sometimes affected with scrophula without the testicle partaking in the slightest degree of the disease; but it oftener happens, that the testicle is affected, and the epididymis not. There is, however, a preparation in Mr. Abernethy's museum, in which the epididymis is converted into, or contains, two masses of scrophulous matter, such as I have so often described; but the testicle and its membranes are in the most healthy state.

SCROPHULOUS AFFECTION OF THE PROSTATE GLAND.

The Prostate Gland is undoubtedly subject to scrophulous disease; but it is by no means so frequently affected with it as many other parts of the body. Dr. Bailie states, that he has found it converted into the same species of scrophulous matter which we so often meet with in the absorbent glands. I have not, however, met with any instance of this kind; but I have met with cases of fleshy enlargement of the gland, in the substance of which several small abscesses have formed, containing a complete scrophulous matter. I have also known cases occurring in young men, who have been at the same time labouring under other scrophulous disease, in which enormous enlargement of the prostate gland has taken place. Three cases of this description occurred during my attendance at St. Bartholomew's Hospital: two of them terminated fatally while they were in the hospital, the other recovered. There was also another patient, who died in St. Bartholomew's

Hospital, with enormous enlargement of this gland, which was considered by some of a scrophulous nature. The patient was a young man, aged nineteen, who was brought into the hospital with retention of urine. At this time a catheter was attempted to be passed, but without success; and after general and local bleeding had been employed the attempt was repeated, but with no better success. As, however, the urine was now continually dribbling away, though, I may observe, this produced no diminution of the tumescence of the bladder, and the pain was not so very great, the usual remedies for taking off spasm and irritation were employed; but during their trial the bladder suddenly gave way, and the urine was extravasated into the cavity of the abdomen; and a few hours after the patient died. Upon examination after death, the prostate gland was found of the size of a child's head, but its substance was very much of its natural density. A tumour had formed on its under part, and projected into the cavity of the bladder. It pressed so much on the sacrum, that there was scarcely any room for the passage of the fæces. It had enlarged unequally at the sides of the urethra, by which, as well as by the tumour at its inferior part, obstruction was occasioned to the introduction of a catheter into the bladder, and to the direct transit of the urine. There was a

false passage through the under portion of the prostate. In this case the mesenteric and the lumbar glands were enlarged; and one of the latter was converted into a mass of complete scrophulous matter. The bladder was thickened and highly inflamed, and almost in a state of gangrene; and a portion, of about the size of a shilling, at its upper part, had sloughed away, through which the urine had been extravasated. The death was produced by an excessive degree of peritoneal inflammation, which came on immediately after the extravasation of the urine. The bladder and prostate of the patient are preserved in Mr. Abernethy's museum. The only history I could procure of this case was, that about three months before, the patient was suddenly attacked with a copious discharge of matter from the urethra, which was succeeded by retention of urine. These symptoms, however, except a slight discharge, subsided; and he continued, as he considered, tolerably well for between two and three months, when the attack which has been just described commenced.

It appears probable that if, in this case, the bladder had been timely punctured above the pubis, the patient would have recovered. It is obvious too, that the operation could not have been performed, with any chance of success, through the perinæum or rectum.

The next is the case of a young man, aged twenty-three, who died of phthisis, and who had had difficulty in passing his water for some time before his death. On dissection the prostate gland was found very much enlarged, though it seemed of its natural structure, and in its inferior portion there was an abscess, containing above an ounce of complete scrophulous matter: the bladder and kidneys were tolerably healthy. The lungs were found tuberculated, and full of small vomicæ.

The next is the case of a man, about 30 years of age, a shoe-maker by trade, who was brought into St. Bartholomew's Hospital under the same circumstances, namely, with retention of urine. He had had a gleet on him, and considerable pain whenever he continued sitting down for any length of time, for several months; and also frequent desire to pass his urine, but there was often great difficulty. On examination per anum, the prostate was found so much enlarged, that its boundary could not be reached by the finger; and it pressed so much against the sacrum, that it was with difficulty the finger could be passed between them. This patient, however, went out of the hospital in less than four months time, free from all irritation, and with the prostate very much reduced in size. I passed a bougie for this patient several times afterwards; and at length it fairly entered the bladder, and without occasioning pain.

It was a great misfortune that the previous state of these patients' health could not be ascertained; but it was impossible to judge with the least certainty about it, as when they came into the hospital they were in a high state of fever and irritation, brought on by the pain they were suffering from the retention of urine.

I have met with several other cases of this affection of the prostate gland, though not so severe, occurring in young men of a scrophulous habit; and they have been generally attended by gleet, which is often so much increased by sexual intercourse, as to put on almost the appearance of virulent gonorrhæa. There is always, too, a great deal of irritation about the urethra and neck of the bladder. These cases generally get well by tranquillizing the constitutional disturbance, and by making use of soothing local applications. A bougie should also be occasionally passed, even though there should be no stricture at the time; as from the state of the prostate, and the high degree of irritation in the urethra, there will always be a great disposition to form stricture; which the bougie will prevent, as well as tend to diminish the particular irritation in the urethra, and in the prostate itself. It will also, more effectually than other means, remove that most troublesome symptom, the frequent desire of making water, which so often attends this com-

plaint. The too frequent introduction of bougies, however, is undoubtedly injurious. Suppositories of opium and other medicines, have been recommended to remove spasm, and irritation, from the neck of the bladder; and in common cases, I believe, they sometimes do good; but when the irritation depends upon a diseased state of the prostate, particularly of the description now under consideration, I should never advise their use. I have frequently tried them in these cases, and I have oftener seen them aggravate than allay irritation. I never either have seen any of that class of medicines, called discutients, have the slightest effect in reducing this enlargement of the prostate gland; but, as I have stated before, it will generally subside if the state of the constitution be improved, and if no other means be made use of locally, but those which relieve irritation.

In that species of scrophulous affection of the prostate, in which abscesses form in different parts of its substance, I believe the matter of the abscesses sometimes makes its way into the cavity of the bladder, near the commencement of the urethra. Under these circumstances sinuses are left in the substance of the prostate, through which the urine insinuates itself into the neighbouring cellular substance, about the anus and perinæum. In this way I consider we may satis-

factorily account for those apparently inexplicable cases of urinary abscesses, which form so suddenly, and without any evident cause. I allude particularly to those cases in which abscesses successively arise, when there is a pervious state of the urethra, and without being preceded by retention of urine. It must be well known by every surgeon of experience that cases of this description are by no means uncommon. These cases, it should be observed, are very different from those cases of suppuration and sloughing occasioned by the urine being extravasated, from a portion of the strictured part of the urethra having given way, or ulcerated, as in a common case of retention of urine. Such cases are bad enough, and are generally attended with more immediate danger; but in the end, I believe, the cases under consideration are the most dangerous and distressing. The former speedily come to a termination; but the latter may exist for years, a constant source of irritation and disturbance to the general health. I am of opinion, however, that these, when their nature is accurately ascertained, may be readily cured, or at least so much relieved, as never to be a source of injury, or even uneasiness, to the patient; for I firmly believe that, if all stricture and obstruction be removed, the sinuses will contract, and the urine cease to escape through them; and this I am convinced may be

always effected in the worst possible cases that we can meet with. It is not, however, my intention, in this place, to enter into the consideration of the best means we possess for the cure of stricture; it is sufficient for me here to point out the means we should employ for the cure of the complaint more particularly under consideration.

The preceding opinions are certainly verified by cases which I have met with in practice, and by the examination of the parts when separated from the body after death. I have met with several cases in which urinary abscesses have successively formed, in some for a great length of time, and in which there had never previously been complete retention, but merely a diminished stream of urine, which have been perfectly cured by the restoration of the natural channel to a free and healthy state. I have the particulars of one very bad case now before me. It occurred in a tailor who, when I first saw him, was in his forty-ninth year. He had had urinary abscesses successively forming for between fourteen and fifteen years; and during the latter part of the time he had passed the greater part of his urine through sinuses in his perinæum. The abscesses had, in the first instance, formed before any thing like retention of urine had occurred; but after some time he had several attacks of this description. By the removal, however, of the obstruction in

the urethra, and by restoring that channel to its natural size, the disease in the perinæum all subsided, and the sinuses contracted; and in less than six months the water all passed the natural way, and the use of the bougie was discontinued. In a short time, however, after this, the urethra again contracted, and fresh abscesses formed; but these were all relieved by again having recourse to the use of the bougie, and he has continued free from all return of the disease by merely introducing a full sized bougie once or twice a month.

In every case of this description which I have had an opportunity of examining after death, the internal openings of the sinuses have all been just within the bladder, or in the prostatic part of the urethra; and the stricture has really occupied only a very small part of the canal, generally not more than from the eighth to the twelfth of an inch.

From all this it must appear very evident, as I have before stated, that these cases differ essentially from those in which an opening is formed in the urethra at the strictured part, and through which the urine becomes extravasated, as in a common case of neglected retention of urine.

It should be remarked, that in these cases it is common for matter first to form about the anus; but there is no certain point at which the urine will make its exit; for I have known abscesses form above the pubis, without there having been

that state called retention of urine; but where the urine has been only retarded, or passed in a diminished stream. The pain and irritation which must be produced by the urine insinuating itself in this manner, and by the consequent suppuration, need not be described by me, as the bare mention of the fact must be sufficient to prove the necessity of procuring a ready passage for the urine from the bladder as speedily as possible. I have already expressed my opinion that the stricture may be always cured by the judicious use of the bougie; but of course this must take some time; and as we are occasionally consulted about cases requiring immediate relief, it becomes necessary that we should adopt some more expeditious means to procure a free passage to the urine; and I know of no means we can employ but the puncture of the bladder; and after this the treatment should be according to the directions already laid down.

The vesiculæ seminales are sometimes affected with scrophula, and I have seen them filled with a cheesy matter. I believe that, when they are in this state, they are sometimes the cause of abscesses forming between the prostate and rectum; and I once had an opportunity of examining a man who died from disease about these parts, in whom there were two sinuses communicating with these vessels, which were also greatly dis-

eased, indeed almost obliterated. Abscesses too, sometimes form in the vesiculæ themselves. There is a case stated in Dr. Bailie's Morbid Anatomy, in which these vessels were filled with scrophulous matter and their coats much thickened.

Ulcers of the prostate are mentioned by some authors, and therefore no doubt they occur; but not having met with a case I am unable to describe their appearance, or the symptoms they produce. Dr. Bailie states, that "ulcers of the prostate gland are not at all common, but when they occur they generally possess more or less of the scrophulous taint."

The urinary abscesses, such as I have alluded to, are said sometimes to arise from ulceration of some part of the urethra, unconnected with retention of urine; and it is very probable that such may be the case, though I have never been able to prove it by dissection: but I cannot conceive it possible for such sinuses as are met with communicating with the interior of the bladder, and passing through the prostate, to arise from this cause.

ON SCROPHULOUS AFFECTION

OF THE BONES, AND OF THE JOINTS

IN PARTICULAR.

The bones, like every other part of the body, are subject to a variety of diseases; they are governed by the same laws, and influenced by the same causes; they inflame, they suppurate, they ulcerate, they mortify, and are liable to take on specific diseases, where a disposing state of constitution exists. To prove that they are subject to inflammation and all its consequences, it will be sufficient to direct our attention to any common injury, where the bone is wounded and exposed; and to prove that they are subject to specific diseases, it will be sufficient to observe the phenomena of syphilis and scrophula. It appears, however, that both these diseases have their particular seat: thus syphilis generally attacks the more hard and compact parts of the bones, so that in this disease the cancellous structure and the joints are comparatively seldom affected; while in

scrophula the softer and more spongy parts, as the heads of the cylindrical bones, the bones of the carpi, and tarsi, and the bodies of the vertebræ, are almost exclusively the seat. The cancellous structure, however, of every part of a bone may be attacked by this disease. I have seen cases of this kind, and in Mr. Langstaff's Museum there are preparations proving it; so that this is a fact that no longer can be doubted.

As too, scrophula is so prevalent a disease, as the bones are very susceptible to it, and as the parts which have been described are the parts which are most obnoxious to it, we cannot be surprised that the diseases of the spine, and of the joints, should, in this country, so frequently partake of a scrophulous nature. Wiseman states, that "the bones are as often affected as any other parts of the body," vide page 252.

The true scrophulous disease of a bone, I believe, always commences in its cellular, or cancellous structure. At first the vascularity of the bone appears to be simply increased; gradually, however, the whole texture is altered; the earthy matter is absorbed, and the bone becomes softer than in health. Subsequently the natural secretion of the cancellous structure also becomes absorbed, and the cancelli are filled with a yellow caseous matter, or a transparent yellow fluid. Sometimes too, with this cheesy matter there is

a whiter and more solid matter deposited in the same bone.

It often happens, that the whole of the cancelli are nearly filled with this cheesy matter, or that several of the cellular partitions being broken down, a large mass of it is collected at one spot, while the rest of the cancelli remain entire, and are filled, partly with it, and partly with the yellow fluid; or many of them may appear altogether empty, not even containing any of their natural secretion. Sometimes we find that only a part of the cancellous structure of the head of the bone has undergone this change; indeed, I am inclined to believe that it often begins in the centre, as I have found the deposition of the new matter is very frequently greater there, and the exterior of the bone commonly remains hard, as has been observed by Wiseman, p. 252; while the interior is completely deprived of its earth, and so soft as to be readily cut with a knife. Sometimes, however, only one side of the bone will be affected, and the whole of the deposit will be found there. It occasionally happens, that all the bones of a joint are affected in this way; but it often occurs that only one of them shall undergo this change. Sometimes too, the cheesy matter pervades the cancelli of the whole bone: and is deposited in innumerable portions of the most minute size.

Such is the condition of the bones in what I consider the first stage of scrophulous disease of the joints. How long they may continue in this state, without further mischief taking place, is quite uncertain; but, usually, the next effect that occurs is, that the external parts sympathize with the disease of the bone, and become thickened and swelled by the deposition of a gelatinous fluid into the cellular substance, and upon the tendons and ligaments surrounding the joint. This thickening often goes on to a great extent, and the parts continue in an indolent state for a very long time; but at length the true character of this, the second stage of the disease, is developed, and more active inflammation comes on: the cartilages now ulcerate or are absorbed, the synovial membrane inflames, and matter forms, so that the whole joint becomes included in the disease, and the suppurative or third stage is established.

The cause of the thickening and inflammation, which take place in the soft parts in this disease of the joints, does not seem to be very evident. It is clear to me that they cannot generally arise from any increased vascularity of the bone, for they seldom occur till after the period when the vascularity is preternaturally great. I have examined bones at an early period of the disease, when the vascularity is greatest, without there having been any external thickening, or other sign of dis-

ease in the joints to which they have been connected. Indeed, the nature and progress of this morbid affection of the bones appear at once to point out another, and a very different cause.

Scrophula, in whatever structure it arises, at first certainly increases the vascularity of the part affected ; yet, subsequently, it not only diminishes it, but, if its progress be not arrested, it completely destroys the natural structure, and substitutes the peculiar matter which has been previously described. In the bones the morbid alteration of structure is precisely the same; and their vascularity, which was at first greater than natural is gradually diminished, till their vitality is sometimes completely destroyed. In the larger bones, from their size, and from only a part of them being affected, and from the progress of this disease being so gradual, that before this state can take place some termination is put to the case, of course this total death of a bone can seldom occur; but in the smaller bones, as those of the matacarpus and fingers, the whole or the half of one of the bones often dies from this disease, and after the formation of abscesses, comes away in one piece, wholly deprived of its earth, and as light as a feather. The heads of the larger bones, however, are in this disease often found in a very similar state, or are what is termed carious.

When I have examined bones at a less advanced

period of the disease, when the cancelli have become filled with the cheesy matter, I have always found the vascularity diminished, and generally in proportion to the duration of the disease. Of course the deposit may take place to a great extent, and yet a considerable degree of vascularity remain; but I am convinced, that as the deposition of the scrophulous matter increases, the vitality of the bone is continually decreasing. The description given by Wiseman of this disease is in its conclusion very correct. He states, "that it gradually rotteth away the interior till the bone becomes a mere shell." There are, however, undoubtedly, as I have described, many intermediate degrees.

If a scrophulous bone be injected at an early period of the disease, or before the whole of its cancellous structure is altered the injection very freely enters its vessels; but if it be injected at a more advanced period, there evidently appear to be fewer vessels, though it is very probable that a fine injection may be forced into vessels which had previously ceased to carry red blood. This point is well illustrated by the vessels of the conjunctiva in a state of excitement, in a state of health, and in a state of general debility. The appearance of these vessels in these different states sufficiently proves, that vessels which have long since ceased to carry red blood may continue pervious, and be again injected. I am therefore

disposed to believe, that the external affection of the joints, which takes place in these cases, is really produced by the state of the bone which has just been described: that the vascularity of the bone, which was at first greater than natural, being gradually diminished, it becomes a source of irritation to the surrounding parts, as when a bone is dead, but not in so great a degree, as the vitality of the bone in these cases is not actually destroyed, but only diminished. Notwithstanding, the affection of the external parts may, perhaps, be in some measure owing to the morbid deposit in the cancelli of the bone; but I think it more depends upon the general alteration in the condition of the bone. If it were attributable to inflammation, propagated from the interior of the bone to the surrounding parts, we ought undoubtedly to find on dissection a corresponding state of the bone, which I am convinced, as I have stated before, is decidedly the reverse of what really occurs, as, when we examine a bone at this period, we most frequently find it of a much paler colour than natural, and its vascularity more or less diminished.

I am aware that in this description of the condition of the bones in this disease, at least as far as regards the degree of its vascularity, I differ from some most respectable surgeons, and whom I very much esteem, and against whose opinions

I would not on any account oppose my own, if I did not feel the strongest conviction of its truth. I am aware that they maintain that there is an inflammatory state of the bone in every stage of the disease, and that the morbid alteration of structure is to be attributed entirely to this cause. I may observe here, that it is a great mistake to consider the scrophulous matter, such as is found in the bones, the glands, or what scrophulous tubercles are formed of, as a new growth, or as a species of tumour, for really it is a mere secretion, or deposition of unorganized matter. Its being a secretion too, is an argument against an inflammatory state of the bone continuing after the deposition has taken place, for the common and invariable effect of inflammation is to put a stop to all secretion in whatever part it attacks, as we often witness in the liver, kidneys, and many other parts of the body, and the secretion comes on, or is restored, only as the inflammation subsides.

In a former part of this Treatise, I have stated how different the morbid deposition which takes place in this disease, is from any effect that ever occurs when we know common inflammation to exist; and I may here observe further, that this alteration takes place without pain, or any other symptom of genuine inflammation; and that at length when inflammation is really excited in a part which has undergone the scrophulous

change of structure, or in the surrounding parts, it produces its common effects, suppuration and ulceration. It appears, therefore, that we have the strongest evidence to prove that the increased vascularity of the bone, which exists in the first period of scrophulous disease, differs in every essential particular from common inflammation; and the condition of the bone in the progress of the disease, sufficiently proves that its vascularity is continually decreasing, as the morbid deposit increases.

To any one who would wish to judge for himself of the accuracy of my description of the state of the bones in scrophulous disease, I would recommend the selection of a diseased and a sound bone from the same subject, to saw them both in two, and then compare their surfaces. If this be done, I feel convinced, from having repeatedly made the experiment, that the surface of the sound bone will appear red and bloody; while that of the diseased bone will be comparatively free from blood, and of a much paler colour. Of course the degree of difference will depend much upon the degree in which the bone is affected, so that to make the contrast as great as possible, the disease should have existed for some time, and the whole of the cancellous structure of the part examined should have undergone the change I have described; as the part which has not is sometimes

affected with real inflammation, and may appear much more vascular than the healthy bone.

As this morbid alteration in the condition of the bones comes on very gradually, so in general does the secondary affection, or the disease of the other parts of the joints. Sometimes, however, when the scrophulous diathesis is very great, or any accidental circumstance happens to derange the health in a particular degree, the progress of the morbid affection in both parts is much more rapid.

The parts which first suffer in consequence of the morbid condition of the bones, are generally, as I have already observed, the soft parts external to the cavity of the articulation; and it often happens that abscesses repeatedly form in them, before the cartilages and cavity of the joint become included in the disease. There are, however, some irregularities in the progress of the disease; but there is always sufficient uniformity to enable an accurate observer to distinguish it. When only a part of the head of a bone is scro phulously affected, the remainder may inflame, and an abscess form in it, before the external parts of the joint have materially suffered; and this, it is obvious, must produce some irregularity in the progress of the disease. Sometimes too, I believe, that the synovial membrane may be the first of the soft parts in which an inflammatory

disposition is excited, so that matter forms, and the cartilage ulcerates at an early period; and this again must occasion some obscurity in the diagnostic symptoms of the disease. Nevertheless, in these cases the thickening of the external parts of the joint takes place, to a certain extent; so that we have this almost exclusive characteristic of the disease commencing in the interior of the bone to assist us in the formation of our prognosis.

Whether at the commencement of the change which scrophula produces in a bone, or when there is simply increased vascularity, real inflammation is ever excited in the bone itself, and propagated to the contiguous parts, as the cartilage and ligaments, I am not positive; but I am very much inclined to believe that it is. If this should prove to be the case, it is evident that it will sufficiently account for some of those apparently anomalous cases of primary ulceration of the cartilages, in which they are said to be ulcerated without any previous morbid condition of the bone, or of the synovial membrane; as in such cases there would not be found on dissection any particular disease, or morbid deposit in the bones. The progress of the disease in other structures, particularly in the glands, renders this opinion very probable. In the ordinary course of true scrophulous disease of the joints, the ulceration

of the cartilages, and the formation of matter in the articular cavity, do not take place till a later period.

The ulceration of the cartilage, however, appears clearly to depend upon the diseased state of the bone, or to inflammation of the synovial membrane, rather than to any morbid condition of the cartilage itself; at least, I have never been able to detect any positive difference in the cartilages of the different bones of a carpus or tarsus affected with scrophula, though, after ulceration has commenced, and the contiguous bone has been carious, I have thought they have sometimes seemed a little thickened and softened. When only a small portion of the cartilage has ulcerated, I have seen the adjoining cancelli of the bone apparently empty, and resembling the cancellous structure of a dried bone. I have also seen masses of scrophulous matter lying in contact with the cartilage at the point of ulceration, and in these cases I conceive the ulceration must have been the effect of an inflammatory state of the synovial membrane. How rapidly the cartilages will sometimes ulcerate, when the synovial membrane is inflamed, every surgeon, who is familiar with the morbid anatomy of the joints, must be fully aware. A circumstance, which has been mentioned, of red vessels shooting into the cartilage at the points of ulceration, I have never

been able to discover, either in the natural condition of the parts, or after they have been injected; and as I have had frequent opportunities of examining bones with their cartilages ulcerated, I conceive this state of the vessels cannot be common.

In this disease of the joints, sometimes the whole cartilage is rapidly destroyed, but in other cases the destruction proceeds very slowly; and I have seen the cartilage nearly entire, though the contiguous bone has been almost completely carious.

When an abscess forms in the bone itself, the matter sometimes makes its way through the cartilage into the cavity of the joint, and occasions very severe symptoms. At other times the matter makes its way to the surface below the cartilage, and the attachment of the capsule, so that the cartilage remains entire. Under these circumstances abscesses may form in the surrounding parts as when the whole joint is diseased; and, indeed, the external parts of the joint become thickened as in ordinary cases.

I met with a case of this kind, the particulars of which will be related presently: in it a probe might be passed completely through the tibia, directly below its junction with the cartilage, and yet upon examination after death the cartilage was found entire. This is the only case of the

kind I have met with in which I could prove it by dissection; but I have had reason to suspect it in others, which have got well after exfoliation, unconnected with the cavity of the joint. When this occurs, or, the cartilages ulcerating, matter collects in the cavity of the joint, and comes in contact with the carious bone, the ulceration and absorption often proceed rapidly, and form deep excavations in the head of the bone; and, indeed, sometimes the entire head, or all that part of the bone which had previously undergone that morbid change which was first described, wholly disappears, or becomes completely carious: I have several times seen this occur in the true scrophulous disease of the hip. I have also seen the upper head of the radius and the lower head of the ulna completely destroyed, and nearly the whole of the condyles of the femur; and it is a very common occurrence, as has been before stated, in the meta-carpal and meta-tarsal bones, and also in the heads of the ribs connected with diseased vertebræ.

In this stage of the disease, when much of the cancellous structure of the bone has been destroyed, and the rest soaked in matter, it is almost impossible to trace any of the original characters of the disease, so that any one not accustomed to examine these cases, or who had a particular object in view, might fancy that it was not a

scrophulous disease. The relation of the following circumstances will more fully explain my meaning:—

I was examining a patient, who had evidently died with scrophulous disease of the hip-joint. When I cut into the joint it was found deluged with matter, and the greater part of the head of the femur was destroyed, and what remained was of a dark colour, and the substance of it quite broken down. A gentleman who was with me, seeing the state of the bone, but principally from having failed to run a knife through the neck, the head being destroyed, pronounced the disease not to be scrophulous. Being convinced myself that it was scrophulous, I examined a little further, and found that the cancelli of the trochanter were exposed, and that a knife readily passed completely through it, all its earthy matter being absorbed, and the disease was now satisfactorily made out to be scrophulous. Part of the cartilage of the actabulum had ulcerated, and the contiguous bone had become carious; but this appeared to be the effect of the great secondary disease that was going on in the cavity of the joint, and independent of the original complaint.

My attention was first drawn to this point by observing the different phenomena which were exhibited by the different bones of a carpus and meta-carpus of a limb that had been removed for

a scrophulous disease. In this case some of the bones were merely softened, and their vascularity increased; some softened and their cancelli filled with a cheesy matter; while others contained but little of it, their cancelli being filled with the yellow fluid which has been already described; and some of them had their cancellous structure extensively exposed, from ulceration of the cartilages; and some were in such a carious state, from being connected with the abscesses which had formed in the soft parts, that, if there had been no other evidence, it would have been impossible to say what the original disease had been. The trapezium, trapezoides, head of the first phalanx of the thumb, and head of the meta-carpal bone of the fore finger, were almost entirely destroyed.

Such is the alteration which takes place in the bones when they are attacked by scrophula, and I know of no other morbid alteration to which they are subject that can be considered as depending upon a scrophulous action.

The progress of this morbid affection of the bones, the state of constitution which attends it, and the nature of the morbid secretion, would, à priori, lead us to suppose that this was a scrophulous disease; but when we also see it so often connected with disease of the other parts, which

is evidently of a scrophulous nature, we may without fear of contradiction assert, that it is.

Some other diseases of the bone have, however, been considered of a scrophulous nature, as necrosis and spina ventosa. I once heard a public lecturer state as his opinion, that necrosis depended on a scrophulous action being excited in the bone. To prove the fallacy of this opinion it is only necessary to notice, that scrophula comes on gradually, and without pain or acute inflammation; while necrosis comes on suddenly and rapidly, and is often attended with most violent pain, and acute inflammation; and that in scrophula there is a continual absorption of bony matter, while in necrosis, the original bone being dead, there is an immediate, and often an excessive, deposition of new bone. There is, however, a scrophulous affection which may be, and I believe often is, mistaken for necrosis by inexperienced observers. I allude to those affections of the bones in which, from disease in the interior, the parts contiguous to the bone become so much thickened, that it appears as if the bone were really enlarged, as in scrophulous disease of the joints, and in which abscesses form, and exfoliation of bone takes place. I have met with cases of this kind in almost every bone in the body, and generally with scrophulous disease existing

in other parts at the same time. I have known it occur in the tibia and fibula, when the knee of the same limb has been the seat of true scrophulous disease. I examined a case when this species of disease had occurred at the angle of one of the ribs, at which point the bone was carious, and for above an inch on each side the cancelli were filled with scrophulous matter. I once saw a similar state of the lower jaw. It occurred in a child between five and six years old. These cases, I am convinced, are occasioned by that state of the bone which I have described as produced by scrophula, and are in many important respects very different from that disease to which the term necrosis is applied by accurate and experienced pathologists. Although, in this species of disease, as long as the scrophulous diathesis remains, there is no attempt to form new bone to replace what has exfoliated, yet as soon as this disposition is removed, I have met with a deposition of ossific matter, in the form of scales, on the surface of the contiguous sound bone. After the cure of scrophulous disease in a bone, I believe the texture of the bone which has been the seat of the disease becomes firmer than natural, and its cancellous structure almost entirely obliterated.

Spina ventosa, according to its modern acceptation, certainly cannot be considered a scrophulous disease, but formerly it might, as it seems that

it included all diseases of the bones which commence in their interior, and are connected with external swelling, and the formation of matter.

When scrophula attacks any of the bones forming the joints of the extremities, and is accompanied with swelling of the joint, it has been distinguished by various appellations—as white swelling, spina ventosa, spina ventositas, pædarthoraces, &c. The latter term, however, was always, as its derivation would imply, applied to the swelling of the joints in children. Several diseases possessing essential differences, as far as regards their origin and the parts affected, have at various periods been included under each of these terms, but white swelling is the name by which this disease of the joints is now distinguished; though even now every chronic affection of a joint, attended with pain, in which the colour of the skin remains unaltered, is by many surgeons termed a white swelling.

Like all other diseases depending upon a scrophulous diathesis, the scrophulous disease of the bones seldom occurs but in early life; however, like the same affection of other parts, there is no certain period after which it may not occur in persons who have evidently a strong hereditary tendency to it, and who have had scrophulous diseases in various parts of their bodies, at different periods of their lives. Thus I attended a

man who, at the age of between forty and fifty, died of phthisis from tuberculated lungs, and who had at that time a scrophulous affection of the tarsal and meta-tarsal bones of his left foot, besides several abscesses about his hip and groin. I also attended a patient, upwards of forty years old, with the same disease in his foot. Two abscesses were opened in the instep, from which complete scrophulous matter was discharged.

From the two preceding cases it appears, that the disease may exist at a very late period; and that it may exist at the earliest age, the two cases related at the beginning of the first part of this Essay fully prove. It is, however, certain, that this disease of the joints, like other scrophulous affections, is oftener found in children than in adults; but this is a circumstance that will assist us but little in our prognosis, as they are also subject to other diseases of the joints. It becomes, therefore, necessary to have other diagnostic signs, and I believe the following will be found generally to conduct us to an accurate conclusion:—

At an early period of the first stage, or when there is simply absorption of the earth, and a morbid deposition in the cancelli of the bone, the change takes place so insidiously and imperceptibly, that it is often impossible to detect it. If there be any symptom produced, it is merely a

sense of slight weakness in the part, which is seldom considered as more than a symptom of constitutional debility, or of the delicate state of the health which generally attends and precedes these complaints. That this disease of the bones may be accompanied by these circumstances is proved by repeated observation, for it is not uncommon to find several of the bones of a patient who has died of scrophulous disease, affected in this way, although it was not at all suspected before hand. I have met with many instances of this kind. Mr. Langstaff has preserved in his Museum the morbid parts, proving that six or seven of the joints may be affected under these circumstances at the same time. This, however, is no more than what we witness in other parts; for where there is a strong scrophulous diathesis, we often discover diseased mesenteric glands, and tubercles in the lungs, at the same time, when we had no reason to suspect their existence before death.

The first decided symptom we have of disease going on in the articulating extremities of a bone, is an occasional deep-seated, dull, heavy, pain, unattended by swelling, and not increased by motion; but, if it be the hip, knee, or ankle joint, which is affected, somewhat increased by the compression of long standing or walking, and it seems that it is to take off this pressure that the patient

keeps the knee rather bent, and never fully extends it in progression.

This state often continues for many months, but generally the pain gradually increases; and after exercise the joint appears swelled, or fuller than natural; which, however, usually subsides after a night's rest. This temporary fulness is sometimes occasioned by swelling of the external parts, but at other times it seems to be occasioned by an increased secretion from the synovial membrane. At length, however, the soft parts external to the joint permanently swell, but the swelling does not at first affect the whole joint, as in other diseases of these parts. In the knee it often commences on either side, just behind the condyles, so that the joint appears wider, and more spread out than it naturally is, and I have often seen it commence by the swelling of a gland immediately above the inner condyle of the femur. There is, however, no point of the joint at which the swelling may not begin.

The swelling gradually increases and affects the whole joint, not bulging as when the capsule is distended with fluid, is elastic, but at the same time feels so firm that the heads of the bones seem to be enlarged, and have a peculiar rounded appearance; and the skin covering it is tense, smooth and transparent, so that there are frequently several large veins conspicuously visible

on its surface. The skin often remains of its natural colour for a very long time, although the enlargement may be very great. In this stage there is always more pain than in the first, but, except occasionally, it is rather a continual uneasiness than actual pain in the part.

As the disease advances in the soft parts, or in the parts secondarily affected, the inflammatory disposition increases, the pain becomes greater, and there is a constant feeling of heat in the joint. The health now suffers from the local irritation, but by no means in so great a degree as when suppuration has actually commenced. At this period it is not uncommon for an abscess to form, from some accidental circumstance in some part of the swelling, for it to burst, and to continue discharging for a short time, and then heal up; and for the parts to remain in the same state as before for months, and I have known it for years, without the formation of any fresh abscesses.

When, however, the third, or suppurative stage is fairly established, it is very common to have successive abscesses form in the parts external to the joint, not communicating with the cavity, which burst and readily heal, or leave sinuses, which often continue, for a long time, to discharge a sero-purulent matter. The matter from these abscesses sometimes makes its way into the cavity of the joint, or by ulceration to the bone, either

above or below it, so that on examining with a probe the bone is found to be bare. In the progress of the case, and, indeed, sometimes at an early period of this stage, the articular cartilages ulcerating, matter forms in the cavity of the joint, and distends the capsule, so that the swelling becomes much larger and softer than it was before, and altered in shape, bulging both above and below the patella.

The skin at this period, if before of its natural colour, becomes of a peculiar purple redness, and will sometimes give way at a prominent part of the swelling, but it oftener happens, that the matter insinuates itself in every direction above and below, and discharges itself at a considerable distance from the joint, forming sinuses, which often continue open, even if the disease terminates favourably, for many months, and even for years. It is common too, for pieces of bone, and of scrophulous matter, to be discharged at different times through these openings.

When the capsule first become distended with matter, the pain is much aggravated, and consequently the health is much disordered, so that before and after the bursting of the abscess, hectic is not an uncommon symptom; but I think it does not so generally or so speedily ensue, as when the morbid condition of the joint is produced by com-

mon inflammation, or by some other diseases to which the joints are subject.

This disease may, I think, always be distinguished from all other diseases of the joints, by its being attended with less pain in all its stages; and by its existing with a great degree of external swelling, often for a very long time before matter forms in the cavity of the articulation, which is the seat of the disease; and by the swelling being but little diminished by the disharge of matter that may take place. In its first stage, or before the interior of the joint is affected, you may certainly distinguish it from primary ulceration of the cartilages by the pain not being much increased by motion.

In the advanced stages of this disease too, even when the cartilages have been extensively destroyed, I have seldom been able to detect any grating sensation, and perhaps this is owing to the earthy matter of the bone being absorbed; while in common ulceration, or absorption of the cartilages, the grating is often most distinct, and the exposed bone rough and hard. In some cases, however, of scrophulous disease, in which the cavity of the joint sympathizes at an early period, the grating is very evident.

The description of the disease which has been given, has been principally applied to the knee-

joint; but its progress and symptoms are precisely the same in the other joints. The only difference consists in the point of its commencement, and in the shape of the swellings.

Having begun with the knee, we will next consider the appearance of the ankle and foot, when affected with this disease, and then proceed to the upper extremity, as the disease of the hip will make a separate section.

The swelling in the ankle most frequently commences on its anterior part, producing a great degree of fulness, as if the instep was raised ; this gradually increases, making it appear broader, as well as higher, and a puffy swelling now forms on both sides of the tendo Achilles : of course the ankle becomes stiff; inflammation takes place, and abscesses form; and the progress of the disease is as in the knee. It is common to have disease of the tarsus and metatarsus, at the same time as disease of the ankle; and I believe more particularly when the disease is scrophulous.

When the tarsus becomes affected the swelling generally begins on the anterior part, and is from the first diffused. As the disease advances, the swelling extends to the sole of the foot, and to the metatarsus, so that the whole foot becomes almost round, and often immensely enlarged. The muscles too, being no longer useful, lose their power, and the toes remain motionless, and appear

smaller and paler than natural, and indeed almost as if they were dead. The progress of the disease is now much as has been described in the knee joint. However, it should be observed, that the symptoms are not usually at any one time so severe, or so much increased as they are when matter forms in any of the large joints; but that in these complicated joints, the carpus and tarsus, one bone becoming affected after another, and abscesses and sinuses repeatedly forming, the extended duration of the pain is exceedingly distressing to the patient.

When the parts of the fingers and toes are affected they often suppurate, and exfoliation of bone takes place; but even then, when the finger has become shortened, and the joint appears for some time in a state of anchylosis, a considerable degree of motion is ultimately recovered. The enlargement of these joints before, and even after suppuration and exfoliation have taken place, is often very great indeed, and frequently continues so for a very long period. It is very common too for a whole phalanx, or only one end, to die and come away, sometimes in one piece, though often in several portions, but no new bone forms round it as in neurosis, and thus the finger becomes proportionally shorter.

The shoulder joint is, I believe, less frequently affected than most other joints in the body; but

having met with three cases of it, I am able to describe the appearances. The cases will be related presently.

This joint undergoes in this disease less enlargement than any other. The principal enlargement is in the axilla, and about the coracoid process; and indeed, at first, the most obvious enlargement is in the latter situation, viz. at the front, or inner side of the joint; but in the latter stage of the disease the greatest fulness is in the axilla. Abscesses do not so frequently form in the external parts of this joint as in the other joints; and when matter forms in the cavity of the joint, I believe it oftener makes its way externally from under the posterior margin of the deltoid muscle.

The appearances of the elbow joint are very marked. The principal swelling is in the anterior part, at what is called the bend of the arm; and here it is often so considerable, as to make the fore-arm appear much shortened, when it is bent upon the humerus. It generally, however, commences at the inner side of the joint, at the bottom of the inner condyle, but often by the swelling of a gland just above that projection; and this, with the swelling at the bend of the arm, makes the greater part of the enlargement, there being commonly less swelling on the outside, or back of the joint, although always some between the condyles and the olecranon, and often the swelling is con-

siderable at the connection between the radius and ulna.

The swelling of this joint is seldom so hard as the swelling of the knee, tarsus, and carpus, but still possesses a considerable degree of firmness and elasticity. The progress of the disease in other respects is similar to what it is in the knee, though the parts being generally kept quieter, the constitutional disturbance is not so great in this joint as in the other joints: on this joint, as on the other joints, the skin appears pale and shining, and the cutaneous veins become dilated.

The enlargement of the carpus and metacarpus is characterized by the same symptoms as that of the tarsus and metatarsus, therefore it need not be described here.

I have not alluded to the wasting away of the muscles of the limb, in the description I have given of the diagnostic signs of this disease; as it is common, in all those diseases of the joints that can be mistaken for the one under consideration, for the muscles below, and even above the joint, to dwindle or waste away, so that the size of the limb becomes strikingly diminished. It sometimes happens, too, that the wasting is confined to particular, or only certain muscles, and especially when the shoulder and hip are the joints affected; and I have known this circumstance give rise to many curious speculations in the inquisitive minds of some intelligent surgeons. I

have heard it attributed to various fanciful causes, and have heard exclamations of astonishment at what they have termed an extraordinary and irregular distribution of the nervous influence. Now, to a mind of common apprehension, the only ground of astonishment is, that there should be found any man so ingenious as to discover such an extraordinary explanation for so ordinary an occurrence. The true explanation of the wasting of particular muscles is, that their action giving pain in the joint, or at least some uneasiness, they cease to act, and consequently waste away, which every physiologist well knows is an invariable consequence when parts become useless, or their action occasions uneasiness. When the shoulder joint is diseased, we ought not to be surprised that some muscles of the humerus should waste away in a greater degree than others, as the action of some may, from necessity, have been kept up, while others may not have acted at all; or the slightest action of some may cause pain, while others may, and must, be able to act to a considerable degree without exciting the slightest pain. When it is the knee, or hip joint, that is affected, it is common, in the advanced stage, for the limb to become œdematous.

The swelling, which has been described as accompanying this disease, is generally, as I have stated before, produced by a deposition of a gelatinous and serous fluid into the cellular substance,

and upon the tendons and ligaments which surround the joint, and not, as the feel of it would lead us to suppose, by enlargement of the bones.

It was formerly believed by many of the old surgeons, that the swelling was always produced by an expansion of the heads of the bones; but more accurate observation made on dissection, after the removal of the limbs, has proved that in general the bones remain of their natural size.

For some time after this observation was first made, surgeons in forming their opinion ran into the opposite extreme, and asserted that a bone could not become enlarged except by external deposition; and Mr. Brodie, in his late publication, adopts the same opinion. This, however, is a mistake, as the heads of the bones may become actually expanded by interstitial deposition, to prove which, there are at present several preparations in different Museums in London.

In Mr. Abernethy's Museum there is a preparation of an elbow joint, which had been removed from a boy in Christ's Hospital, in which the head of the ulna was very much enlarged by actual expansion: the other bones of the joint were in a diseased state, but had not enlarged. This child was highly scrophulous; and I attended him afterwards with a strumous abscess in the stump, and with enlargement of the glands of his neck.

Mr. Langstaff has in his possession a knee

joint, in which both the bones, the femur and tibia, are very much enlarged by actual expansion; the external laminæ of the bones not being thicker than when the bones are of their natural size, and the cancelli healthy, though of rather greater solidity than natural.

Wiseman's description of the state of the disease appears to be pretty correct, when he describes the condition of the joints after death; for he informs us that, in some cases, the swelling is entirely made up of a deposition of an albugineous matter into the soft parts, while at other times it is partly from the same cause, and from expansion of the bones. However, in speaking of the disease in its recent state, he generally insinuates that the bones were enlarged.

Le Dran also mentions a case in which the condyles of the femur of a boy of eleven years of age were found exceeding their natural size. The limb in this case had been amputated, and the boy recovered. That this was a case of expanded bone is evident, as he just before relates the case of a man who had had a scrophulous affection of his knee for between two and three years, the condyles of whose femur, after amputation, were found to be enlarged, not by expansion, but by an external deposit of bony matter. In this case all the cartilages of the joint were completely destroyed.

ON THE TREATMENT.

Scrophulous disease of the joints, like all other scrophulous diseases, depends, as has been already stated, upon a peculiar and disordered state of health which we must of necessity remove before we can expect effectually to cure the local disease. The plan of treatment to be pursued for this purpose having been laid down in the first part of this Treatise, it is unnecessary to repeat it in this place.

The local treatment during this state of the health consequently becomes principally palliative; but as soon as the health is improved we may by local treatment very much assist in the curing of the local disease. As this part of the treatment chiefly consists in avoiding all sources of irritation, and in preventing inflammation, rest must of necessity be a primary object. It therefore becomes of the greatest importance to keep the joint that may be affected in a state of perfect quietude. For this purpose, if it be the shoulder joint, the arm must be supported by a sling, and to prevent any motion by elevation and depression, the sling should be fastened to the patient's side; this may be done by various means, as by pinning it to the garments, or by passing a roller once or twice round the body.

If any sleeve be worn on the affected arm, it should be one that is unconnected with, or that does not make a part of the other garments, as, in this way, it can be taken off with much greater facility. When the elbow is the joint that is diseased, simply keeping the arm in a sling is generally sufficient; but even in this case some attention is necessary, as the whole fore-arm should be included in the sling: and the arm should always be kept in the same degree of flexion, and this object may be effected by various simple contrivances. If, however, there should be any difficulty in retaining it so, it is very easy to have a splint made by any surgeon's-instrument maker that will answer every purpose. When the carpus or metacarpus is the seat of the disease, the arm should be put up in the same manner as it is in cases of fracture, except that there should be no external splint; and it is of great importance to keep the fingers in a proper degree of flexion. When the knee is diseased, it should be kept perfectly straight and steady, either by two short splints, one on either side, extending a few inches above and below the joint, or by one long splint, extending from the trochanter-major of the femur to the foot; the patient at the same time being confined to the bed. When the ankle joint, or foot, is the part affected, it is equally necessary that the patient should be confined to bed, and

that a splint should be worn. In these cases the outer-splint, used in a fractured leg, answers every purpose.

The perfect state of quietude recommended above should be enjoined so long as the scrophulous habit of body remains, so long as there is any pain in the joint, and so long as there is any disposition in the soft parts to form abscesses. If, however, at an earlier period, it be judged necessary for the improvement of the patient's health that he should take air and exercise, and it is one of the joints of the lower extremity that is diseased, he should be compelled to walk on crutches, and the limb should be still steadied by means of splints. Of course, when the upper extremity is affected, there can be no objection to using exercise.

While the specific, or scrophulous action, is going on in the joint, I believe, as I have stated before, that there is no local treatment that can have any positive influence in removing it; still, however, by regulating the temperature, and by the judicious application of leeches, we may effect a great deal towards preventing inflammation and the formation of abscesses in the soft parts surrounding the joint. Nevertheless, in the abstraction of blood, we must be careful not to weaken the patient too much. When abscesses have formed, the best application we can make use of is a bread and water poultice; or, if there be much pain, a

poultice made with the decoction of hemlock or poppies is perhaps preferable.

It frequently happens that when an abscess forms, communicating with the cavity of the joint, it is accompanied with a great degree of tension and pain, by which the health becomes considerably disturbed. In such a case as this, I am convinced that it is better to open the abscess, and that by so doing a great deal of mischief may be prevented. I have often adopted this practice, and I am sure with manifest advantage, as the contents of the abscesses have been thus completely evacuated, which is seldom the case when they discharge themselves, as they usually do, at some distance from the joint, forming several sinuses, which are subsequently very difficult to heal. There is no danger to be apprehended from exposing the cavity of the joint to the air by this mode of practice, as that may be effectually prevented by closing the wound in the manner recommended by Mr. Abernethy in lumbar abscess. There is no danger either to be apprehended from the puncturing of the capsule, as when the parts are in a healthy state. In all the cases I have seen of this kind, the aperture has always healed by the first intention, even in those cases where the matter has repeatedly collected, and as often been evacuated.

When all irritation in a diseased joint has ceased,

and there only remain swelling and sinuses, at the bottom of which bare bone may be felt with a probe, the application of issues or setons near to the part where the bone is bare is highly efficacious; or if there be no open sinuses, and there be only enlargement of the joint remaining, the application of repeated blisters, or the tartar emetic ointment, will be of the greatest benefit. The judicious use of compression at this period, by means of proper bandages, is often highly serviceable; and perhaps it is most efficacious when made by means of Baynton's bandage.

This plan of treatment, however, may be had recourse to, although there should be some degree of pain continuing; but, in the earlier stage of the disease, which is accompanied by disorder of the general health, I am thoroughly convinced that the use of these kind of stimuli, or of electricity, compression by strips of soap, or of adhesive plaster, or of friction, is highly prejudicial; indeed, these kind of remedies, in this stage, not only aggravate the local irritation, but also very much disturb the general health.

The plan of treatment which has been recommended will, I am sure, in the generality of cases, prevent any very serious consequences from ensuing, provided it be adopted in an early stage of the disease. But it sometimes happens, that, under every plan of treatment, some cases will do

ill, that hectic symptoms come on, and that for the preservation of our patient's life, it becomes necessary to amputate the limb. In these cases, however, I feel certain, as I have observed before, that there will always be found to be something radically wrong in the general health, or disease in some more important part existing at the same time, as mesenteric disease, tubercles in the lungs or in the brain, or some other disease equally formidable. Of course, I now except those cases which come to the knife, on account of bad treatment in the first stages.

That I am correct in the foregoing opinion appears certain, from the frequency of patients, who have had obstinate external scrophulous diseases, dying of the same disease in some internal and more important part; but more particularly from the same occurrence so often happening to patients, who have undergone amputation of a limb for a scrophulous disease of a joint, the disease in the lungs or mesentery having prevented the removal of that state of health which has kept up the disease in the joint.

It was a common opinion among the older surgeons, that the external disease kept in check some disease in a more important internal part, and that the removal of the one favoured the developement of the other, and a very respectable surgeon, in his late publication, has adopted the

same opinion; this, however, does not appear to me to be the case, otherwise we ought not to see patients who have been long labouring under hip disease die, while that disease is in its full vigour, of scrophulous disease of the lungs, mesentery, or brain. This fact I had often observed myself, and therefore inquired among my medical friends as to their experience on this point, and they all agreed with me, that patients who die with hip disease generally die either of tuberculated lungs, or disease of the mesenteric glands. Among the cases that will be brought forward of the diseases of the joints there will be several illustrative of this point. If the disease in the joint were capable of restraining the disease in any of the viscera, of course we should not see patients die under these circumstances. This fact, too, further confirms my opinion, that the diseased state of some of the vital organs is the true cause of some cases of diseased joints terminating so unfortunately.

From the preceding considerations it becomes necessary, previously to forming an opinion on the propriety of amputating a limb on account of a scrophulous disease of a joint, that the following inquiries should be made:—1st, Whether the patient has been under the care of a judicious, well-informed, and experienced surgeon?—2dly, Whether the local disease is certainly acting upon

the general health?---3dly, Whether the diseased joint is keeping up such irritation, that its preservation and the restoration of the general health are incompatible?---And, 4thly, Whether there be a fair chance of the patient's recovery, provided the limb be removed?

If, upon making the first inquiry, we find the patient, instead of having been under the care of a respectable surgeon, has been under the care of some quack, who has made use of, in the most active stage of the disease, tight bandaging, electricity, or other violent means, and so produced extensive inflammation and abscesses; and if then, upon making the second and third inquiry, we find that the local disease is so terribly disturbing the general health, that without its removal there can be no chance of restoring a tranquil state of health; and if, upon making the fourth inquiry, we ascertain that there is no other disease existing which can diminish the chance of the patient's ultimate recovery, we are completely justified in performing the operation.

But if the reverse of this is the case; if the patient has been under the care of a respectable surgeon, and every thing has been done from the first that could be done; if it be uncertain that the local disease produces the general disorder; or if, according to the third inquiry, it be not certain, that the restoration of the general health

be incompatible with the existence of the local disease; or if there be evident symptoms of disease existing in parts which have more important functions to perform, as in the lungs, an operation should by no means be advised; for to perform it under these circumstances would be, as Mr. Abernethy expresses himself in his lectures, adding cruelty to calamity.

Anchylosis is generally considered as one of the common consequences of a scrophulous affection of a joint, and as frequently taking place when from successful treatment the case is cured, and I should have alluded to it before, if I had not felt certain that it is a very uncommon termination of true scrophulous disease of the joints. In Mr. Langstaff's Museum, where there are numerous preparations of scrophulous bones, there is not an instance of it in any of the joints of the extremities; nor is there in Mr. Abernethy's, though there is of a different form of disease. In the spine, no doubt complete anchylosis generally takes place when the bones are affected with scrophula; but in the joints of the extremities it certainly does not, or at most but very seldom.

In an early stage, and while the disease is going on, and often for a considerable time after it is apparently well, the heads of the bones appear to be fixed, and anchylosis to have taken place; but if we watch the case for some time longer, or till

it is really well, we generally find that the motion in the joint gradually returns; though often only partially, from the destruction and adhesions of the ligaments. It may, à priori, appear rather paradoxical, that, when the heads of the bones are denuded of their cartilages, part of their substance destroyed, and their diseased surfaces in contact, they should not become united, more particularly as we so often see it ensue in the bones of the spine under the same circumstances; but we shall not be surprised when we recollect that, generally, a portion of the cartilage and synoveal membrane remains; that the bones in the latter stage of this disease lose most of their vascularity, and that it can be seldom possible to prevent all motion in the joint, particularly as it produces but trifling pain. If we examine a joint when the cure is far advanced, we generally find that there is a soft white matter interposed between the two bones, which may be one reason why anchylosis so seldom occurs. That the motion of a joint should be restored after its bones have entirely lost their cartilages is not at all astonishing, as we know that an artificial joint may form where a bone is fractured, and the opposing surfaces of bone become as smooth as when covered with cartilage.

Although anchylosis is a rare occurrence in this disease of the joints, the degree of motion in the joint is frequently very much diminished, so that

attention to the position of the limb is of very great importance. For when the knee is the articulation affected, if during the cure the limb be kept perfectly straight, when the disease is removed, the patient will be able to walk with great facility, and without much lameness; as a very slight degree of motion in the knee is sufficient to enable a person to walk extremely well. It is equally important to attend to this point, when the elbow or wrist is the joint affected; for the limb will be of very little use if, during the cure of this disease, the arm and fingers have been kept straight, as it is obvious a straight arm, without the power of flexion at the elbow, even if the hand be perfect, must be comparatively useless; and the same may be said of the hand, if, during the cure of the disease of the carpal bones, the fingers be kept straight, as, by the time the disease is cured, the muscles have frequently entirely, or nearly, lost all power of moving the fingers, as well as their joints being stiff; but if, during the cure, the fore-arm is kept bent at right angles with the arm, and the hand be perfect, the limb will still be most useful; and if the wrist be the seat of the disease, if the fingers be kept bent during the cure, and the power of the thumb remains, which is very common, it is clear that the hand will be of considerable use. The advantage, too, will be greater, as there is almost always some

motion remaining in the joints and in the fingers. When, however, from improper treatment the knee has become contracted, or when there is a similar state of the elbow, it may very frequently be wholly relieved by the constant use of moderate extension, when judiciously applied. It is, nevertheless, first highly necessary that the disease in the joint be ascertained to have perfectly subsided before any attempts are made to remove the contraction of the limb. In these cases, it is very requisite that the extension be kept up continually; and for this purpose an instrument must be made use of, the extending power of which can be increased, as the contraction becomes diminished. I succeeded in relieving by such means a case of very great contraction of the knee, which had continued for between six and seven years. A considerable degree of inflammation was excited in the joint during the cure, but it was always readily relieved by the application of leeches.

Having described all the circumstances relating to scrophulous diseases of the joints which I have facts to prove, I will adduce the following cases:—

A little boy, four years of age, of dark complexion, hair and eyes, was, in the autumn of 1815, brought to me, at St. Bartholomew's Hospital. His right knee was slightly swollen, and rather painful when pressed, though not at all so when bent and extended. He had been observed

for nearly two months to limp with that limb, and to walk with it always a little bent, and consequently to support it with his toe. He had had scrophulous disease in the glands of his neck, and in his groin, for some time, and his parents at first attributed his lameness to this latter cause. He had every symptom of a child labouring under scrophulous disease, and was in what is called a very delicate state of health. I ordered him to be kept in bed; his knee to be washed three times a-day with some vinegar and water; half a grain of calomel and six grains of scammony to be given him every other night, and that he should be kept upon milk diet.

After this I did not see him until the following February, when he was again brought to me much worse, though at first he had been considerably better. His knee was firmly contracted and bent nearly at a right angle with his thigh; and in circumference it measured between three and four inches more than the opposite one. It was very tender, and as there was evidently matter forming, I ordered a bread and water poultice to be applied to it; and I prescribed the same powder as when I saw him before. He was also ordered to be kept constantly in bed. I had not an opportunity of seeing him again till the following month, when I found he had been extremely ill, that an abscess had formed and burst, and left

several sinuses, one above the joint, and two below, one of which was nearly in the middle of the calf of his leg. The swelling of the joint was still very considerable, but now appeared as if simply enlarged, and his health was improved. During the day, he had simple dressings applied to the sinuses, and clothes dipped in warm water all over the joint, and during the night a bread and water poultice. He pursued this plan, taking the same medicine and the same diet till the following autumn, when finding that his health was good, that the knee was in a quiet state, but much contracted, and apparently permanently anchylosed, and that the sinuses were open and discharging, and that bone could be felt at the bottom, I inserted a seton on the outer head of the tibia, which was kept in for nearly a twelvemonth, at which time the sinuses had healed, the dead bone had exfoliated, and the limb was almost straight. The seton was taken out, and the knee simply washed with salt and water night and morning. The limb subsequently became perfectly straight, and he has continued in good health.

The next case is that of a young woman, twenty-five years of age, of dark hair and eyes, but fair complexion, who had her left arm amputated in St. Bartholomew's Hospital, on account of a scrophulous affection of the carpus and meta-

carpus. She was in what I should term a delicate state of health; her appetite was very bad, and her bowels costive. She had had her eyes, upper lip, and glands of the neck affected at various times by the same disease, but at the time of the operation she had no other local disease. The disease in the arm had existed for about two years. It began with a sense of weakness and occasional pain in the wrist, and continued in this state for about two months, from which time the pain became constant though not severe, and a slight degree of swelling took place. The swelling in the carpus and metacarpus subsequently increased to a great degree, the skin became discoloured, and abscesses formed in various parts of the swelling, leaving sinuses, some of which communicated with the subjacent bones. All power over the fingers was now quite gone; but she was capable of moving the thumb, though in a very slight degree. During the existence of the disease she was under the care of different surgeons, and consequently made use of different modes of treatment, but all without any benefit. She was at the sea-side, and made use of sea-bathing for several months, but there was no improvement in the disease during the time she was there, and her health became evidently worse. At the time she underwent the operation her health was as good as it had been for several months, and it

was performed only because she particularly requested it, she being anxious to get rid of a limb which was a constant source of uneasiness to her, and never likely to be of any material use. She had been in the habit, during the whole course of the disease, of taking large doses of opium every night, which of necessity were a constant source of disorder to her stomach and bowels.

Upon examining the diseased parts after the operation, most of the bones of the carpus were found deprived of their earthy matter, and partly of their cartilages, and their cancellous structure was filled with a cheesy matter, or transparent yellow fluid, as has been already described. The heads of the metacarpal bones were all ulcerated, and in a great measure destroyed. The principal part of the swelling was found to be produced by a deposition of a gelatinous fluid into the cellular substance surrounding the tendons, ligaments, &c. The heads of the metacarpal bones were so destroyed, and so soaked in matter, that no trace of any specific disease remained.

For the first four months after the operation this patient was in tolerable health, but at this time her health again became impaired; she complained of pain in her right knee, and on examination it proved that there was swelling at its inner part. She now became my patient, and I ordered her to keep in bed; and to prevent her

moving the joint I applied a splint to the outside of the limb, and put her strictly upon the plan of treatment which has been recommended in the first part of this Essay; and in the short space of a few weeks she became so much better in health, and the limb being free from pain, she would not lie in bed any longer. She, however, continued the constitutional plan of treatment, and to my knowledge remained perfectly well a space of nearly two years.

A young man, twenty years of age, was brought from the country to St. Bartholomew's Hospital, for the express purpose of losing his left leg, as he was suffering with a scrophulous disease of his knee joint and of his foot. The disease in these parts had existed between three and four years, and during the last five or six months had become much worse. The disease in the knee began several months before it appeared in the foot. When he came to town his health was very bad, his appetite was very indifferent, he was constantly purged, and frequently passed large worms; he got very little sleep; his pulse was seldom less than eighty-five, and often as high as 140, and he was very much emaciated. Abscesses had repeatedly formed in his knee and foot, and there were sinuses running in various directions: he had also a little hacking cough. Mr. Abernethy, under whose direction I attended him, judging from all the cir-

cumstances that an operation would not be likely to be successful, endeavoured to dissuade him from it, but he felt so convinced that the disorder of his health was produced by his knee and foot, that he was determined to lose them. The operation was accordingly performed, but without the least benefit to the poor fellow: indeed he was much more reduced by it, and all his disagreeable symptoms increased; and in less than seven weeks after the operation he died.

Upon examining the bones after the removal of the limb they were found softened and carious, and the condyles of the femur diminished in size. The bones of the tarsus were in the same state, and some of them filled with a cheese-like matter, as was the head of the tibia also. Upon the examination of his body after death, the mesenteric glands were found scrophulously diseased, some of which had suppurated; and there were tubercles of the lungs, some of which had produced vomicæ.

This case proves, that there may be great disorder of the system independent of the external local disease; and, therefore, that by performing an operation we only aggravate the patient's sufferings.

The next is the case of a boy, aged eleven, who died in St. Luke's Workhouse, of mesenteric disease, and who had tuberculated lungs, although

he had had scrophulous disease of his left knee joint for between three and four years. Indeed the bones were in such a carious state that a probe could be readily passed through the head of the tibia and condyles of the femur, by introducing it through any of the sinuses above and below the joints. In this case the joint was so stiff and immovable, that before the patient's death it was supposed anchylosis was taking place; but upon examination after death it proved the ends of both the bones were carious, that matter was intervening, and that there were deep excavations in them.

In this case there were no decided symptoms of tuberculated lungs before his death, and the symptoms of mesenteric disease only appeared during the last year. The boy's brother died in the same way with hip disease, and his case will be related in the next section. If the limb had been amputated and the patient died, it might have been said that the mesenteric disease would not have developed itself, if the external local disease had not been removed.

The next is the case of a little girl, of rather dark complexion, hair and eyes, between twelve and thirteen years of age, who suffered amputation of her left leg, in St. Bartholomew's Hospital, in consequence of a scrophulous disease of the knee joint, which had existed between four and five

years. At the time of the operation she was reduced to the greatest possible degree; she had a troublesome cough, and a confirmed hectic, and there were extensive abscesses round the joint. She, however, recovered rapidly, and before the expiration of the fifth week was well in health, had lost her cough, and the stump was completely healed. She had the hectic the first night after the operation, but subsequently she had no return of it. The hectic evidently was not the consequence of debility, as we are often told, but clearly of irritation.

This case proves how completely the disorder of the system may be kept up by the local disease, which it may, however, at first have induced, so that if you remove the one the other will certainly cease.

The two following cases are demonstrative of the same points, but my limits will not allow me to relate them in detail:—

The first is the case of a little boy, about eight years old, who had a scrophulous affection of his knee joint, who was terribly reduced, and who had had symptoms of mesenteric disease, and yet perfectly recovered after the limb was removed.

The next is the case of a little boy, eleven years of age, whose limb was amputated on account of a scrophulous disease of the tarsus and metatarsus, who perfectly recovered, although he was

so ill before hand, from the irritation of the foot, that it was debated whether the operation would give a chance of recovery.

In all these cases the bones were softened, and contained the scrophulous cheesy matter, or the transparent fluid, and in some parts were in a complete state of caries.

That none of these cases would have terminated in this unfortunate way, viz. by an operation, if they had been properly treated in an early stage, is my firm belief; and in proof of the curable nature of this disease, when it attacks the bones, the following cases are adduced. The two first cases that have been brought forward are also illustrative of this point.

A poor man, aged thirty-three, a milkman by employ, who had been subject to scrophulous enlargement of the glands of his neck while a boy, was seized with a slight swelling on his right ankle, not attended by much pain, and the principal inconvenience that arose from it was a sense of weakness in the joint. He continued his employ nearly three months after he first observed the swelling, by which time the whole joint had become very much enlarged, and during the last week that he used it very painful. He had not hitherto shewn it to any medical man, and when I saw it, there was a collection of fluid on the outer part of the joint, but this evidently did not

communicate with the cavity of the joint, as a great part of the swelling remained hard, as if produced by enlargement of the bones, and there was no bulging of the capsule at those parts where it would have been most visible. A poultice was applied to the outer side of the joint, and a splint to the inner side of the limb, to steady the joint. His bowels were very costive, therefore some opening medicine was given daily, at regular intervals, until the bowels were opened, and the compound calomel pill was ordered to be taken every other night. In two days the swelling and pain having increased, and the skin over the tumour becoming red, I punctured it, and let out above three ounces of a sero-purulent fluid, mixed with flakes of a curdy matter, and a poultice was applied to the swelling as before.

A great deal of ease was thus given to the patient. The opening, however, healed at once, and the matter again collected, and was again let out; the same process again took place, but the whole swelling was by this time very much reduced, and at the end of three months the patient returned to his employ. By attending to his diet, and taking the compound calomel pill every other night, his bowels had become very regular, and his habit of body altogether was, he said, better than it had been for many years.

The next case is that of a young man, aged

twenty-three, a gardener by employ, who had had an enlargement of his left ankle joint for nearly six months. It was not attended with much pain until the last few weeks, when matter had collected evidently within the cavity of the joint. The complexion of the joint now appeared so bad, that an eminent London surgeon decided that he must lose the limb. This, however, happily did not take place, for by pursuing the constitutional treatment laid down, by applying a splint as in the last case, by thrice evacuating the fluid collected in the cavity of the joint, and healing the aperture, which was done readily, and covering the whole joint with a bread and water poultice, and the occasional abstraction of blood by leeches, in the course of six months he was well enough to walk about with a crutch, and a twelvemonth after was perfectly well. This case shews the good of letting out the fluid when there is a large collection in the cavity of a joint, for if it had not been done, in all probability the matter would have insinuated itself in different directions, forming sinuses difficult to heal, and by not having been completely evacuated, have occasioned a considerable degree of constitutional disturbance.

The next is a case precisely similar to the last, except that the subject was a child, only a year and a half old, and the joint that was diseased was the knee. The case was treated in the same

manner, and with equal success. In this case the abscesses of the joint were opened twice, and each time healed as readily as in the last. This case was brought to Christ's Hospital, and was also seen by Mr. Abernethy.

The next is the case of a little boy, aged eight years, who had a scrophulous affection of his elbow joint, two scrophulous abscesses in his arm, and the glands of his neck very much diseased. The disease in his elbow had existed for several months, the joint was much enlarged, and an abscess had formed exterior to it, and bursting, had left the ulna bare: the arm was so contracted that it could not be extended. However, by pursuing the plan of treatment which has been recommended, that is, by regulating the state of the bowels, and by attention to diet, by applying bread and water poultices to the joint, and occasionally leeches, when there was more pain than usual, the disease was quite removed, and the arm became almost entirely straight.

The next is the case of a boy, in Christ's Hospital, about fourteen years of age, of a scrophulous habit, who had, first, a disease of his shoulder joint, and subsequently of his elbow, both of which were quite cured by the same means as adopted in the last case. About two years after, however, he again complained of pain in the same shoulder. This, however, by suspending the arm

in a sling, and by attending to the state of his bowels, went off in a short time, and he has since continued perfectly free from all uneasiness, and uses it as well as the other.

The next is the case of a little boy, nine years of age, who was three years before I saw him attacked with slight occasional pain in his right shoulder, attended with weakness, and an indisposition to use it. He was at the same time in a very delicate state of health, had costive bowels and very bad appetite, and was also affected with scrophulous ophthalmia. There was not much difference between the size of the two limbs, but the muscles about the humerus and scapula appeared to have somewhat wasted away, and were very flaccid. The patient was now taken to one of the most celebrated London surgeons, who considered it a case of paralysis, and consequently ordered it to be moved about as much as possible, and to be electrified twice a-week. At the same time he prescribed for him some tonics. This plan of treatment was persisted in for nearly three months, but then, as the child was much worse in every respect, he was taken to another surgeon, who ordered the arm to be kept in a sling, yet at the same time the whole limb to be well rubbed, night and morning, and tonic medicines to be continued. He persisted in this treatment for several months, as the constant rest rendered the pain in

the arm much less severe than it had been while he was pursuing the former plan of treatment. However, as there was no evident amendment in the disease, and, as the joint was observed to swell, he now became a patient of mine.

At this time the head of the humerus appeared enlarged, and the edge of the glenoid cavity thickened, as did the coracoid process of the scapula. All the muscles arising from the scapula, and attached to the humerus, and indeed all the muscles connected with that bone, had very much diminished in size; but least of all the deltoid. There were apparently very few fibres of the biceps remaining, but these were sufficiently strong to bend the fore-arm with considerable force. Among the other muscles connected with the humerus that had wasted away, were the latissimus dorsi and pectoralis major.

There was considerable motion remaining in the joint, as the arm might be rotated and elevated to a certain degree, but beyond that all motion was performed by the elevation or depression of the scapula on the trunk. The muscles of the fore-arm remained of their natural size, and retained their usual power, as the right hand could be kept firmly clenched for as long a period as the left. The pain in the joint was not severe, and but slightly aggravated by motion, except when an attempt was made to move the humerus be-

yond the contracted sphere that has been described before; the pain, however, was generally worse during the night than in the day. His general health was very bad, he was very weak, his appetite was very indifferent, his tongue was white and furred, his bowels were costive, and his pulse seldom less than ninety. From the whole state of the case, I pronounced the disease a scrophulous affection of the shoulder joint, and consequently ordered the arm to be constantly supported in a sling and kept perfectly quiet, and a bread and water poultice to be applied all over the joint. I also ordered half a grain of calomel, and five grains of rhubarb, to be taken every other night, with an occasional purge, and the greatest attention to be paid to the diet, according to the rules I have previously laid down.

This plan of treatment, with very little variation, was pursued for a space of two years, when the disease might be considered as recovered from. There were, however, some slight variations made in the treatment, though the principles were the same, which will be noticed presently. For a considerable period, the joint appeared completely anchylosed, but subsequently it became evident that the bones had not united, and the sphere of motion has gradually increased. The os humeri of this arm was above an inch shorter than the other, and its head, though completely in its

natural situation, was considerably reduced in size, being much less than it naturally should be. The glenoid cavity, however, was not destroyed, as its edges were very perceptible from the wasting of the muscles. The appearance of the joint was such, that a superficial observer might have almost believed, if he did not know that the joint had been diseased, that the humerus was dislocated: indeed, a surgeon who examined it gave that opinion. Since the motion in the joint began to return, the muscles have also begun to increase in size.

At one period the soft parts round the joint swelled considerably, and there was a great deal of tenderness. In consequence of this leeches were occasionally applied, but never more than one or two at a time. Their application in this manner relieved the pain, and did not disorder the general health. After this, when the parts had got into a quiet condition, the surface of the joint was kept for several months in a state of soreness, by applying the tartar emetic ointment every morning; during this time, however, a poultice was applied every night, but in the day the shoulder was covered with flannel to promote external irritation. No other kind of medicine was given during the whole two years than what has been described, and this was continued the whole time; the form, however, was sometimes

altered, but more to amuse the parents than from any actual necessity. The diet, too, was sometimes varied a little, but the quantity was always regulated as attentively as possible.

I have related this case at such length as the shoulder is not so often the seat of the disease, and as it is a particularly interesting one, the joint so well recovering, although the humerus was so extensively diseased. Since writing the above I have seen this patient, and he is still improving; there is more motion in the joint, and what is remarkable, the head of the humerus, which had been so much reduced in size, is evidently larger than it was, and this enlargement is clearly not from disease, as there is neither tenderness nor pain in any part of the joint.

I attended another case of scrophulous disease of the right shoulder joint very similar to the above. It occurred in a little girl, ten years of age, of dark complexion, hair, and eyes, who was first a patient in St. Bartholomew's Hospital, and it terminated with equal success. Matter, however, formed in the capsule, which made its way under the deltoid muscle, and was discharged at some distance from the joint. This patient had also scrophulous disease of the glands of her neck; and a scrophulous abscess had formed above the left clavicle.

I have also at present under my care, a little

girl, aged twelve years, of fair complexion, and blue eyes, but dark hair, with the same disease of the shoulder joint, and also of the elbow and wrist of the same limb. Abscesses had formed in the wrist and shoulder before I was consulted, and when I first saw her there was considerable pain and inflammation in the parts, and she was in a feverish state; but all these symptoms have been relieved by the repeated application of leeches, by keeping the joints constantly wet with a strong decoction of hemlock, by attention to her diet, and by regulating the evacuations from her bowels.

The following case very strongly proves the possibility of curing the disease of the joints in a very advanced stage. A young woman, aged twenty-two years, of very fair complexion, and light hair and eyes, had suffered from scrophulous disease of her spine, of the glands of her left groin, and of the foot of the same side, for several years. She had at one time completely lost the use of her lower limbs, but by strict confinement to the reclining posture, and by the use of counter-irritants, she speedily regained a very considerable degree of power in them. She had repeatedly had abscesses form in her groin and heel, which had always healed after discharging for a few weeks. The abscesses in the groin may have been the consequence of irritation communicated by the foot, but from the appearance of the

matter which they contained, it was clear they were of a scrophulous nature. She had always been in a very delicate state of health. When the disease had gone on in this way for between three and four years, the whole of the foot began to swell, and continued enlarging till it measured round one and a half more than the opposite one. Abscesses now formed in different parts of the foot, and discharged very profusely, and the swelling extended to a considerable way up the leg, which at this part was more than as large again as the upper part, and it continued in this state for nearly six months. During this time her health was horribly disordered, her bowels were exceedingly irregular, she had a troublesome cough, and most profuse nocturnal perspirations, and she was so restless that she scarcely got any sleep but what was procured by large doses of opium. Her pulse was for many weeks never less than 120 in a minute, and frequently at 150; and her appetite was so bad that she subsisted almost entirely for some time on about a pint of porter daily, as her stomach rejected every thing else. Indeed she was altogether so ill, that her life was despaired of, and she suffered so dreadfully from the repeated formation of deep seated abscesses, that the limb would certainly have been amputated, as her friends particularly urged it, if it had not been considered that she was too ill in

health to undergo the operation with even a probable chance of surviving it. At length, however, the disposition to form matter ceased, and she gradually improved in health; and in less than eight months, after the amendment decidedly commenced, she was so far recovered as to be able to leave this country for the West Indies, and the week before she set off she called on me in a coach, and was able to walk from the coach to the back parlour, in which I see my patients, without any other assistance than what she derived from leaning on her sister's arm. The recovery in this case was certainly most extraordinary; for of all the cases of diseased joints which were amputated, and which I had the opportunity of witnessing during my long attendance at St. Bartholomew's Hospital, I do not recollect one which could be said to be in every respect so bad as this.

The following case also fully proves the power we possess of restraining disease of a joint, if at the same time the state of the health be properly attended to :—

A young man, aged twenty-three, was taken into St. Bartholomew's Hospital with disease of his left knee, and placed under the care of Mr. Abernethy. The disease had come on very gradually, and first appeared after a sprain, and had existed for nearly a twelvemonth. When he came into the Hospital the knee was nearly as large again

as the opposite one, and it was evident that the capsule was distended with matter. The swelling, however, was clearly made up, in part, of external deposition. There was excessive pain in it, and the matter had made its way very nearly to the surface, just below the head of the fibula. His health was very much disordered, but I believe the most obvious disorder was from the irritation of the knee, though it was undoubtedly aggravated by derangement of the stomach and bowels, which existed at the same time.

It would be useless for me to enter into a detail of the progress of this case: it will be sufficient for me to state, that, by preventing all motion in the joint by means of splints, by the occasional application of leeches, by poulticing, and, after the active irritation had subsided, by making the external part sore with the tartar emetic ointment, by attention to his diet, and by regulating the evacuations of his bowels, he recovered in less than a twelvemonth, so far as to be able to walk about with only the assistance of a stick; and subsequently, he got so well as to be able to walk, and even carry loads, without any assistance whatever. The motion of the joint, however, was very much diminished, and the limb was shortened; all this was chiefly owing to the tibia being drawn by the action of the muscles behind the condyles of the femur. This took place when

the disease was at its height, and after matter had formed in the cavity of the joint, which very strongly shews the formidable nature of the morbid alteration which the structure of the joint had undergone. No circumstance either, could more fully prove the necessity of applying splints in disease of the joints; for it is obvious, that if the action of the muscles had been properly restrained, this unfortunate displacement could not have occurred. Moreover, in cases like this, it is necessary that a long splint, extending from the trochanter major to the foot, be made use of, for in no other way can the requisite support be so easily and efficaciously given.

In the case which has been just adverted to, short splints, extending a little way above and below on each side of the joint, were applied from the first, but how inadequate they were to restrain the undue action of the muscles, the result of the case sufficiently proves. The short splints, however, in less severe cases may be quite sufficient to prevent any injurious motion of the joint.

The next, and last case which I shall adduce, also proves that these diseases may be cured even at the most advanced stage, when there is not an irremediable state of the general health.

A young woman, aged twenty-five, of beautifully fair complexion, light hair, and blue eyes, had disease of her right wrist and hand for nearly

two years. They were much enlarged, and there was considerable inflammation. During this time several pieces of bone came away, and abscesses repeatedly formed, which produced so much irritation and disorder of the health, that at consultations held by several eminent surgeons, it was twice resolved to amputate the limb, to afford her what was supposed the only chance of saving her life. When it came to the point, however, she both times refused to submit; and ultimately she perfectly recovered, without undergoing any operation.

This brief description contains all the points of importance in the case, and its progress so precisely resembles many of the preceding cases, that to enter into a detail of it would be tedious and useless.

That the treatment I have recommended, when judiciously employed in an early stage of these diseases, will generally restrain inflammation, and prevent the formation of matter, and this without the use of counter-irritants, I could adduce many additional cases to prove, but I am fearful of entering into tedious prolixity, and I consider the cases already brought forward as sufficient to convince every impartial person. The importance of this object is incontestible, for when once the capsule becomes inflamed and distended with matter, there is no saying how soon the cartilages and

ligaments may be completely destroyed. The following case very decidedly illustrates this point.

A hackney coachman was brought into St. Bartholomew's Hospital with dislocation of his left knee and rupture of the external lateral ligaments, and the integuments of the outer side of the knee were so drawn in between the tibia and condyles of the femur, that no means that could be used were efficient to retract them. In a few days high inflammation arose, matter rapidly formed in the capsule, which made its way externally, and was discharged by several openings; an excessive degree of constitutional disturbance and erysipelas of the whole limb ensued, and before the tenth day the man died. On examination after death, the whole joint was found disorganized; the capsule was full of matter and lymph, and some parts of it were almost in a state of gangrene, the semilunar and other cartilages were almost wholly absorbed, and the lateral and other ligaments were extensively destroyed.

The preceding case very strongly shews the disorganizing effects of inflammation, and as in every species of disease of the joints there is a great disposition in the ligaments and synovial membranes to inflame, it always must be of the highest importance to guard against its accession, and when it has taken place, to moderate and restrain it by every means in our power.

ON THE SYMPTOMS AND TREATMENT OF

SCROPHULOUS DISEASE OF THE HIP JOINT.

The progress of the disease, and the alteration which it occasions in the structure of this joint, so much resemble what occurs in the other joints under the same circumstances, that I shall be very brief in the observations I shall make on this part of the subject.

The cancellous structure of the head of the femur undergoes in this complaint precisely the same changes which I have described as taking place in the same situation in the other bones. The neck of the femur too, and the great trochanter, are often included in the disease, and sometimes the cancelli of the whole bone.

In the progress of the disease the cartilage of the head of the bone ulcerates, and the synovial membrane inflaming, matter forms in the cavity of the joint. At this period it is common for the cartilages of the acetabulum also to ulcerate, and for the contiguous bones to become extensively

carious. The head of the femur too, is generally in a similar state, and sometimes the whole of it, and even the neck, are destroyed. Indeed, in protracted cases, it is not at all unusual to find, after death, that the head of the bone has been removed by ulceration, or broken down by caries, and mixed with the matter in the joint, and the neck extensively carious; and sometimes the trochanter major is in a similar state. Occasionally, abscesses form in some part of the head or neck, communicating with the cavity of the joint by small apertures; or we find deep excavations in them filled with a dark coloured and offensive matter.

Though the femur is more frequently the only bone originally affected in this disease of the hip, it is not more surprising that the bones of the acetabulum should be subsequently included in the disease, than that the ligaments and other soft parts should be secondarily affected. Nor is there more reason to be surprised at finding them so extensively carious, when we consider how rapidly common inflammation is capable of disorganizing bone and every other part of the body. The round ligament is generally destroyed very soon after the cavity of the joint becomes included in the disease.

Scrophulous disease in the hip joint, as in all the other joints, comes on so gradually and

insidiously, that it is scarcely possible to discover it till the morbid alteration of the bone has gone on to a considerable extent. The first indications that we have of this disease, if we except the disorder of the general health, are, that the patient is a little lame, and walks on his toe, and that he complains of being tired much sooner than he would if he were in health. This state will often exist for several months without the patient feeling pain, but at length the lameness increases, and the affected limb is never carried so far forward in progression as the opposite one, and shooting pains are occasionally felt in the joint and other parts of the limb. Upon examination, the muscles of the thigh and nates of the affected side are found wasted, and as the disease advances, the wasting of the muscles increases, and the limb becomes evidently smaller than the opposite one, and the nates of that side appear widened and flattened. If pressure be now made over the joint, behind the great trochanter, or in the groin, it occasions pain, and the bone about the trochanter often feels as if it were thickened and enlarged.

It is not uncommon for the glands of the groin to take on the scrophulous action, to enlarge and suppurate, as one of the first symptoms of the joint of the hip being diseased. I have twice known them under these circumstances to enlarge

enormously, and form large abscesses, having no communication with the cavity of the joint, nor with diseased vertebræ, and previously to which there has been no lameness, nor other evidence of the joint being affected.

In one case, which occurred in a little girl, between seven and eight years old, nearly ten ounces of matter, such as scrophulous abscesses usually contain, were discharged, and in a very short time the parts completely healed, and the patient walked about afterwards without any lameness, for nearly seven months, before it was ascertained that the hip was diseased.

In the other case, a lad, between seventeen and eighteen years of age, there was an abscess similarly situated, and containing about the same quantity of matter. This patient got his living by hard labour, and yet was not in the slightest degree lame, till the swelling had enlarged to a considerable degree ; and even at the period the abscess was opened, it was not discovered that there was any disease in the joint, nor did he complain of pain when it was moved. He, however, in less than a twelvemonth after, died of diseased hip. The other patient perfectly recovered.

Having seen both these cases at an early period, I feel convinced that the abscesses were the consequence of the enlargement of the glands of

the groin, though I fully believe that the origin of the disease in them was in some way or other dependent on disease in the head of the femur. This fact of the occasional enlargement of the glands of the groin, in an early stage of hip disease, accords with the observation I have made, that disease of the elbow, or of the knee joint, is often first indicated by glandular swelling; in the former by enlargement of a gland situated above the inner condyle of the humerus; in the latter, of a gland situated just below the inner condyle of the femur. In the progress of the complaint a degree of fulness and swelling gradually arise in the parts exterior to the joint, particularly in the groin and behind the great trochanter; inflammation and great tenderness come on, the health is much disturbed, and matter forms.

In disease of this joint, as in the others, it often happens that abscesses form in the external parts, and I believe they oftener occur about the great and lesser trochanter than in other places, but of course they may occur in any other situation. The formation of these abscesses seldom produces so much pain and constitutional disturbance, as when suppuration commences within the capsule.

When matter does form in the cavity of the joint, it is often very suddenly, and it is always attended by a great accession of pain and general disorder. At this period the slightest motion of the

joint often produces the most excruciating pain, which, however, is generally much relieved by the matter finding an exit. When the capsule is distended, there is usually much fulness in the groin, and behind the great trochanter, and pressure in these parts occasions very great uneasiness. When matter collects in the articular cavity, from its distance from the surface, and from the thickness, great weight, and pressure of the superincumbent integuments, it often insinuates itself in various directions above and below the joint before it makes an outlet, and this is frequently at a great distance from the joint, so that the matter cannot be discharged at one time, and other external suppurations take place, to give vent to the extravasated matter. These abscesses seldom close after they have discharged their contents, or, if they do, they soon re-open by fresh suppuration and ulceration; but they generally leave sinuses passing in various directions, yet all ultimately communicating with the joint, from which there is a yellow serous fluid constantly discharged, and occasionally pieces of complete scrophulous matter, till the original disease in the bone is cured, or death terminates the case.

There are two cases mentioned by Cheselden, in which the matter made its way through the acetabulum into the pelvis; indeed, I believe it is not very uncommon in protracted cases.

In this stage of the disease, when abscesses and sinuses have formed, the soft parts about the joint become so much thickened, that the buttock on the affected side, which was at first so much wasted and flattened, acquires a greater degree of fulness than natural, and when the head of the femur gets displaced, which is too common an occurrence, it puts on a peculiar rounded appearance that cannot be mistaken by any one who has once witnessed it.

When the displacement of the head of the bone takes place the limb consequently becomes shortened, and the same thing of course occurs when the head of the bone is destroyed, as there is nothing to restrain the action of the muscles. In these cases, when the head and neck of the bone are destroyed, the displacement and drawing up of the femur does not usually occasion any particular direction, or turning in or out of the foot as in dislocation from accident, or when the head is of its natural size.

In the first stage of this disease, it is common for the limb to appear either elongated or shortened, but I have oftener seen it appear shortened. There is, however, no real elongation or shortening of the limbs, but it entirely depends upon the position of the pelvis with respect to the spine, for as this is inclined more or less to the diseased side, of course the limb must appear proportionally elongated or shortened.

That the head of the thigh bone may, as I have stated before, be completely destroyed from scrophulous disease, is indisputable. In the Museum, to which I have often alluded, there is also a preparation of this kind. The head of the femur in this case is wholly destroyed, and the neck of the bone and the great trochanter have suffered from the same disease, and are completely deprived of their earthy matter.

There is also, in the same Museum, another preparation, in which the head of the thigh is dislocated, but almost entire, and its cancelli filled with scrophulous matter. The bones of the acetabulum too, are in the same state, and not in what is termed a carious state, but part of their cancelli exposed, and containing a similar matter to that which there is in the cancellous structure of the head. That part of the shaft of the femur which is preserved, is also in the same state.

To procure preparations which will shew the characteristic change of structure that takes place in scrophulous disease of the hip joint, is very difficult; for when the cases are treated scientifically from their commencement, they generally terminate favourably, or if they terminate unfavourably, it is not commonly the case until the disease has existed in them for so long a period, that the whole structure of the articulation has become disorganized, and no vestige of the ori-

ginal disease is to be traced; and because the surgeon cannot, in these cases, as in disease of the other joints, enrich his Museum by indulging his cacoethes for operating.

In this disease, it is certain that the patients often refer the pain that attends it in its early stage to the knee, and sometimes the pain is said to be very acute there. It has been also observed, that the pain is frequently not confined to any one spot, but affecting the whole limb.

When the seat of the disease is in the hip, and the pain is referred to the knee, that joint may be moved without occasioning any pain, while, if the hip joint be moved, often severe pain is the consequence. This circumstance, the wasting of the muscles of the nates in a greater proportion than the other muscles of the limb, or of those only concerned in the motions of the leg, and the other symptoms which have been described, will generally enable us with accuracy to distinguish the part which is morbidly affected.

Sometimes there is pain about the hip and thigh from diseased vertebræ, or from irritation about the origin of the crural nerves, and only in one limb; but when it arises from these causes the pain is not increased by motion, at least seldom in any decided degree. There is, however, lameness often attending this disease; but then it is very different, as it arises from some loss of power in

the muscles, and there is a peculiar degree of unsteadiness in the motions of the limb, while in the hip disease there is the greatest caution observed in every movement of it. Indeed, the limping and halt of a diseased hip, and the lameness produced by a partially paralytic affection, or by hurried and irregular contractions of the muscles, can never be confounded nor mistaken by any one of the least observation and reflection.

ON THE TREATMENT.

The constitutional treatment of scrophulous disease of the hip joint, of course, differs in no respect from the treatment recommended in all other scrophulous diseases. There are, however, in the local treatment certain minutiæ to be attended to, arising from the nature of the part affected, but the principles which must govern this part of the treatment are the same as in scrophulous affection of the other joints.

Directly it is ascertained that the hip joint is diseased, it is always absolutely necessary to strictly enjoin the most perfect rest, as, without attention to this point, all the remedies we may employ will generally fail in arresting the progress of the disease. As, too, in all the varieties of hip disease, there is invariably a great disposi-

tion in the thigh to become bent upon the body; in the leg to become bent upon the thigh; and in the spine to become awry, a mere state of rest is not all that is requisite, but it is also important that we attend to the position of our patient. The patient, therefore, should not only be constantly confined to bed, but should also lie in an horizontal position; the lower extremities should be kept constantly straight, and the trunk of the body should not be allowed to incline either to one side or to the other, so that the heels shall be as near as possible in the same line.

It is necessary that these circumstances be attended to as long as the diseased actions are going on in the joint; however, we need not enjoin such a complete state of rest until the mischief that has been done is wholly repaired; but still a great deal of care should be taken till the parts are completely sound.

Although rest will do much to prevent irritation and inflammation, and to allay them when they have been brought on by a state of action, still it is necessary to employ other means at the same time, or much mischief will occur which might have been prevented by the judicious use of other remedies.

The abstraction of blood from the part by cupping, or by leeches, does not appear to me, in disease of the hip, to be attended with much, if

any good, nor to have any material influence in preventing suppuration in the joint, or in the surrounding parts, at least by no means in the same degree as in this disease of the other joints.

The early use of counter-irritants I have not recommended in scrophulous diseases of the other joints, because, as I have stated before, they seem rather to increase the swelling of the soft parts which always accompanies it, and consequently to promote the formation of abscesses; but in the disease in this part, I consider their early use as highly serviceable, and as tending very much to prevent the formation of abscesses. This is mentioned as a fact, and not with reference to any particular theory. The greater distance of the seat of the disease in this joint, from the parts in which the counter-irritation can be made, may be sufficient to account for this apparent anomaly.

Various modes of making counter-irritation have been proposed, as the actual cautery, burning with moxa, issues, setons, scarifications, perpetual blisters, tartar emetic ointment, &c. and most of them, no doubt, are sufficient to produce the necessary irritation. Issues, however, or the keeping a part of the external surface of the joint irritated and discharging, with the tartar emetic ointment, I prefer. At the same time that these means are adopted, I have observed that the efficacy of the treatment is much increased by

enveloping the joint in a bread and water poultice. If an issue be decided upon, the preferable place for making it is just behind the great trochanter. If, after the issue is established, there is still a great deal of pain remaining, Mr. Crowther recommends the insertion of a seton in the groin; and it may be a useful practice; but in none of the cases I have met with has it been necessary.

The good effects of this plan of treatment are often remarkable, for soon after its adoption I have known the pain and other symptoms of irritation almost suddenly relieved; and I fully believe, that, when counter-irritation is made in a judicious manner at an early period of the disease, and if rest and proper constitutional treatment be employed at the same time, we shall very seldom be troubled by the formation of abscesses, and consequently our patients will recover in a much shorter time. Nothing, however, can be more uncertain than the period of recovery, for we sometimes see cases, which at first have a most threatening appearance, recover in a few months; while at other times we see cases, that at first were not half so severe, almost as many years in recovery.

I have, during the last few years, seen several cases of disease of the hip, which at first threatened badly, recover without the formation of abscess,

or at least without the discharge of any matter, so that if any formed in the cavity of the joint it must have been absorbed. In two of these cases dislocation of the head of the femur took place, and yet they recovered with no deformity except what arose from the shortening of the limb, and the alteration in the shape of the buttock. There was also a little boy in Christ's Hospital, whom I attended under the direction of Mr. Abernethy, with disease of the right hip, whose thigh was displaced and retracted without the formation of abscess, who afterwards died in consequence of a high degree of fresh irritation which was occasioned by a fall he received, at a period when the cure was far advanced. Dissection after death, however, proved that he would have had but little chance of long surviving, if he had not met with the accident, as his lungs and liver were studded with tubercles. In another case, a great deal of fulness and swelling occurred in the groin, and existed for a long time with every symptom of their being matter collected, but it all gradually subsided, by keeping the surface of the superincumbent parts irritated with the tartar emetic ointment.

When a patient, with disease of the hip, is first allowed to walk about, he should always make use of crutches, and take care that no stress be laid on the affected limb. If anchylosis had taken place, of course there would be nothing to be

apprehended from motion, but this, as I have before stated, is a very rare occurrence in scrophulous disease of any of the joints, and particularly of the hip, and therefore is not to be depended upon; and perhaps it is owing to the other bones of this joint being less frequently primarily affected in scrophulous disease. I must, however, repeat here, that the bones composing the acetabulum are sometimes most extensively carious, from having primarily undergone that change of structure which I have described as scrophulous disease. This has been denied by many surgeons, and particularly in a late publication on diseases of the joints; but as I have stated before, there are facts to prove that it is undoubtedly true. It is, however, the great extent of the morbid affection of the different bones of the joint in bad cases, and the intervention of part of the cartilages, or of a soft unorganized matter, in slighter cases, which I have found on dissection to be more particularly the cause of anchylosis so seldom occurring in this disease.

If the cartilages are removed to any considerable degree, the attachments of the round ligament must be destroyed, and it sometimes happens before that period; and I have never seen a case in which the round ligament being destroyed, the head of the femur has remained in the acetabulum; in all the cases there has been more or less

of displacement. Indeed, I fully believe, that when the round ligament is destroyed, and the capsule is weakened or distended with matter, and the action of the muscles is not restrained by some contrivance of art, the head of the bone must become displaced, and that it is not necessary to search for internal causes, as they are called by some of the old surgeons, and recently by the author I have before alluded to, for pushing the head of the bone out of the acetabulum. A case is adduced by this author, of dislocation from an internal cause. It is stated that the head of the femur was found lodged on the dorsum of the ilium; that the bones were of their natural size, but deprived of their cartilages, except in a few spots; that the round ligament was completely destroyed; and that the acetabulum was almost full of lymph and pus, to which is attributed the office of pushing the head of the femur out of its cavity; and it is further stated, "that in the majority of such cases it is probable the dislocation is produced in the same way." It is not for me to decide on the legitimacy of this opinion, but I may add, that the means do not appear to be adequate to the end; and that I lately witnessed a case in which the head of the femur was found, on examination after death, resting on the ramus of the ischium, with hardly any diminution of size, and that there was no accumulation

of matter in the acetabulum that could possibly account for the displacement. The fact of the dislocation, at this early period, is indeed all that it is of primary importance for us to know; for by whatever means it be effected, it is clear that in the treatment it must be always necessary to attend to the position of our patient, and to properly guard against any undue action of the muscles.

Every surgeon must have experienced the great difficulty there is in preventing all motion in the joint, and in restraining the action of the muscles, in diseases and injuries of the hip, and particularly when children are the patients. It must be admitted, that the common splints are wholly inadequate, from the excessive deformity which so commonly exists after the cure of these cases. To obviate this difficulty I have invented a splint, which most effectually prevents all motion in the hip joint, and equally restrains all undue action of the muscles. It so completely answers these purposes, that the patient may be moved in bed, or taken out, without fear of disturbing or of injuring the joint. In fact, the thigh cannot be moved in the acetabulum, nor the trunk on the thigh. It consists of a spring, which is firmly attached to the pelvis above the trochanter major of the femur, and to it is fixed a long splint, which is applied to the limb in the ordinary manner, with or without an inner and outer short splint. It

occasions no pressure that can possibly be injurious, nor does it create the least uneasiness.

If the plan of treatment, which has been recommended in the preceding pages, be adopted from an early period of the disease, and if the vital organs are as yet sound, I should feel no doubt about the successful termination of the case; but if any of the more important viscera are diseased, or if the case be of that inveterate nature that the whole of the cancellous structure of the femur and bones of the acetabulum be morbidly affected, so that there is no point at which healthy actions can commence, which must be the case before any sanative process, in the smallest degree resembling anchylosis, can take place, we can have but little chance of relieving our patient. That this is the true state of the case appears evident, from a fact to which I have before alluded, viz. that when patients, who are labouring under scrophulous disease of the hip, die, their death is not usually occasioned by the diseased joint, but by the disease having attacked more important parts.

The following cases will more particularly illustrate the points which have been discussed in the preceding pages:—

The first is the case of a poor boy, aged fourteen, who died of diseased hip, which had existed for nearly four years. The femur had

become dislocated, and the limb much shortened; and abscesses had repeatedly formed in the joint, or in the parts surrounding it. At the time of his death he was suffering from severe cough and profuse expectoration of matter. His abdomen was very large; and he had troublesome diarrhœa, which had continued for above a month. He had also a confirmed hectic.

Upon examining the hip after his death, the whole joint was in such a confused mass of disease, that it was impossible to say in what part it commenced; however, upon examining the knee joint, some clue was given to the nature of the disease. In this joint the bones were much softened, and the cancelli filled with a cheesy matter. The cartilages were entire, but there was about half an ounce of synovia in the cavity of the joint. The soft parts were in a healthy state. Upon examining the abdomen there were found nearly four quarts of serous fluid collected in its cavity; and the mesenteric glands were most extensively diseased, some being converted into a cheesy substance, while abscesses had formed in the place of others. Upon examining the lungs they were found tuberculated, and vomicæ had formed in different parts of the right lung.

The next case is very similar to the former. A poor boy, aged seventeen, died in May, 1818, of hip disease, which had existed for nearly three

years. The pain which had accompanied it had never been very severe. The head of the femur had become displaced, the limb was shortened, and abscesses had formed all round the joint, and left sinuses wherever they had burst. Several glands of the groin had also suppurated, and left scrophulous ulcers. At the time of his death he had a great difficulty in breathing, and a troublesome cough, though without much expectoration.

Upon dissection, the head of the femur was found in great part destroyed, but what remained was resting on the dorsum of the ilium, which at that part was slightly carious. The acetabulum was full of lymph and pus, and the cartilages, at its edges, slightly eroded. The trochanter major was in part so soft you might easily cut through it, while the neck of the bone was hard and unaltered in structure. The lungs were tuberculated, and in the right lung there were two large abscesses containing complete scrophulous matter, mixed with a very little blood. The mesenteric glands were many of them much enlarged, and some of them partly converted into a cheese-like matter.

I have met with several other cases similar to the two preceding, but as the morbid parts were not examined, or there were no relics of the original disease remaining, I will pass them over, and proceed to relate the following cases, illustrative of the treatment I have recommended :----

A young man, aged twenty-one years, was, in the beginning of the year 1815, obliged to take to his bed on account of a sense of weakness and occasional pain in his right hip, which had continued for about three months. The pain was not severe, nor much increased by motion, but was much aggravated when he attempted to stand on that side. The parts about the trochanter major were thickened, and tender when pressed upon. The limb appeared elongated; his health was not good, as he was weak and languid, and lost his appetite, and his bowels had been in a costive state for many months, and his tongue was white, but not thickly furred. His pulse was not influenced by his state of health. He was now put upon milk diet; alterative doses of mercury were given him; his bowels were regulated; and he was kept constantly lying in an horizontal position; his limb was also kept perfectly straight. He continued this plan of treatment for about three months, without much alteration in the symptoms, during which time leeches were several times applied to the parts about the great trochanter, and a bread and water poultice was applied all round the joint, night and morning.

Soon after this, without any aggravation of the symptoms, the limb became shortened, and on examination it was evident that the head of the femur was dislocated; and this was the more

easily ascertained, as the muscles of the nates, and of the whole limb, had lately become considerably wasted, which they were not for some time. An issue was now made just behind the trochanter major, and the same treatment continued.

Every thing thus went on exceedingly well till the following July, when the treatment having been changed for a generous stimulating diet, and tonic and stimulating medicines, his health became deranged, the parts painful and irritated, and an abscess formed under the vastus externus muscle, which was opened, and twelve ounces of scrophulous curdy matter were evacuated. The aperture readily healed, but the matter again collected, and was again let out in the same way. His health was now exceedingly deranged, and he was therefore put upon the treatment under which he had gone on so extremely well at first. When he had resumed this plan of treatment for only a few weeks, it was obvious to every one who saw him, how much he had improved in health, and the disease had regained its former quiet state. From this time he pursued this plan of treatment for eight months, when his health being in a most tranquil state, and the hip free from pain and tenderness, he was allowed to get up, and to walk with the assistance of a crutch, at the same time supporting his foot with a sling passed over his neck. At this time the thigh bone seemed to be

anchylosed, but after he had been up for a few weeks there was evident motion, and subsequently a new joint formed, as he had a considerable degree of motion in the hip, and was able to walk without his crutches, only supporting himself with a stick. When I saw him last it was three years since his first attack. This patient was in St. Bartholomew's Hospital, and I attended to him under the direction of Mr. Abernethy.

In November, 1817, a servant girl, aged eighteen years, was taken into St. Bartholomew's Hospital, on account of disease in her left hip joint. Her health was very bad, her bowels were costive, appetite very little, and her menses had stopped. She had complained of slight pain and weakness in her hip for three or four months before she took to her bed, and had been in ill health for about a twelvemonth. At the time she first laid up the limb was shortened and the nates were flattened. She had occasional dull shooting pains in the hip, which were generally worse at night. The pain was not increased by moving the limb directly backwards, but it was if rotatory motion was carried to any extent. The parts about the joint were tender to the touch, as were those about the trochanter, which were also thickened, so that the bone appeared enlarged.

The patient was put upon the same treatment as was adopted in the case before, except that an

issue was made immediately, and kept open with the kali purum, by which means we were enabled to keep the joint enveloped in a bread and water poultice, which she stated always gave her a great deal of comfort. There was no immediate benefit from the issue, but at the end of six weeks she was evidently considerably better, and indeed expressed a wish to be permitted to get out of bed. She was, however, confined to her bed till the expiration of eight months, when she got up perfectly well, without any appearance of shortening, or elongation of the limb.

This case at first had a very bad complexion. I should have observed, that whenever there appeared to be a little additional irritation, the tartar emetic ointment was generally rubbed into the groin, and by that means it was readily allayed.

A young woman, aged twenty-nine, was obliged to lie up with disease in her right hip. She had had weakness and pain in it for several months, which were much increased by long standing on it, but which almost wholly subsided when she rested in bed. In this case, as in the last, pain was produced by rotating the limb, but not by moving it backwards and forwards. The muscles of the nates were wasted, and there was thickening and tenderness about the trochanter major.

Perpetual blisters, and occasionally leeches,

were applied to the groin, and neighbourhood of the great trochanter, in this case, and the health was attended to as usual, and in less than six months she got up quite well.

It should be remarked in this case, that this patient when a child had disease of the opposite hip, which terminated by displacement of the head of the bone, and shortening of the limb, and that matter had collected in various parts. A new joint, however, had formed, so that the limb was of considerable use in progression. Nevertheless, the case had been treated badly, so that the knee was permanently contracted, and the thigh could not be completely extended; the spine was also awry. All these circumstances, it is obvious, are prevented by keeping the limb straight, and the patient in an horizontal position.

A little boy, between two and three years old, who had always enjoyed remarkably good health, was observed to become pale and thin, to lose his appetite, and to be frequently sick. He had been in this state for about two months, when it was observed that he limped, and that he seemed inclined always to be sitting down, or to be crawling on the floor, and that he always kept his right leg and thigh bent. When I saw him, which was in January, 1818, I found the whole limb was wasted, that the nates were flattened and appeared broader than natural, that the limb

appeared elongated, and the bone about the trochanter much thickened. This little boy, like all the other patients, suffered me to move his limb up and down, but he would not suffer me to rotate it at all. His health, as has been observed, was very bad; his tongue was white and furred, and his bowels were in a very irregular state, being either purged or much confined, and his motions were either very light or very dark in colour. He was put upon the same plan of treatment as the other patients whose cases I have described, and in less than six months he so far recovered that he might be considered well. Still I was afraid to trust him to walk much on the diseased limb, therefore I directed his friends to keep him lying down the greater part of the day. He had an issue made behind the trochanter major, which was kept discharging for several months. The tartar emetic ointment, however, after this was healed, was occasionally rubbed in. I have seen this child subsequently at different periods, and the hip has continued well; but from the inattention of his friends, his mother being dead, he is suffering from lateral curvature of his spine.

I have had two cases of the same disease doing exceedingly well without issues, merely by attending to their general health, and by keeping up a certain degree of soreness, by friction with the tartar emetic ointment, on the skin surrounding

the joint. The cases are precisely of the same nature, therefore it is unnecessary to relate them in detail.

I may here repeat, that by adopting the measures which have been recommended, two species of deformity will be obviated; the one the turning out of the limb, and the other its contraction, or the permanent bending of the thigh upon the trunk, and the leg on the thigh. How frequent, too, these species of deformity are, every time we walk in the public streets must sufficiently convince us. The preceding cases also tend to prove what I have before stated, viz. that by pursuing the plan of treatment which has been laid down in the preceding pages, the formation of abscess will generally be prevented.

This disease of the hip joint, of course, is to be distinguished from other diseases of that joint by the same diagnostic symptoms as enable us to discriminate in the other joints, and therefore they need not be here repeated; besides, in all cases of diseased joints the same principles should guide our practice.

ON SCROPHULOUS DISEASE OF THE SPINE.

GENERAL OBSERVATIONS.

Every individual, but particularly every surgeon, must be so fully aware of the frequency of diseases of the spine, and of their distressing consequences, whether we consider the paralysis, or only the deformity which they produce, that it must be wholly unnecessary to offer any apology for entering at some length into the discussion of this part of the subject. It is the more necessary, too, to discuss this part of the subject fully, as the treatment of these diseases is generally so bad, or so little attended to, that a great degree of unnecessary deformity is almost always the consequence. Indeed, I have no hesitation in declaring my belief, that all the worst cases of deformity which we meet with in the streets, and which must be considered as *recoveries*, would have been, with proper treatment, almost completely prevented. Many of these cases are cases of lateral curvature, in which it is evident, from their general appearance, there could not have been any

material disease and destruction of the bodies of the vertebræ, and therefore cases which might have been most easily cured. I will, however, dismiss this subject till I come regularly to the treatment of these diseases.

I have already stated that the bodies of the vertebræ are subject to be attacked by scrophula, and described the morbid alterations which it produces in them, in common with the spongy parts of the other bones. I need not, therefore, recapitulate these points, but merely mention those particulars which especially relate to this part of the subject.

It appears to me that there are two species of curvature of the spine depending on scrophulous disease; one occupying only a certain part, and being, generally, from within outwards, and what is known by the term ANGULAR CURVATURE; the other occupying a large part, or the whole of the spine, and being, generally, from side to side, and what is therefore known by the term LATERAL CURVATURE. In the former, there is always destruction of some portion of the vertebral column, and often, for a considerable time, progressive destruction of bone, cartilage, and ligament; and the vertebræ undergo precisely the same changes as the extremities of the other bones in scrophulous diseases of the joints; in the latter there is generally no destruction of parts, but merely an alte-

ration of structure. In this, however, the vascularity of the bones is increased; their earth is absorbed, and they become softer than natural; and, from some morbid alteration in the condition of the ligaments, the connections between the different bones become loosened and relaxed. In this species, too, when the curvature has been of great duration, I have sometimes met with that morbid deposit in the cancelli, which I have described as the invariable consequence of scrophulous disease long existing in a bone; and when it goes to any extent, I believe caries, or decay of the bones, will, in the end, if the scrophulous diathesis be not removed, always take place. I once met with a case in which, under these circumstances, thirteen of the vertebræ were at their anterior surfaces so affected by caries, that there was general bowing outwards of the back. I have met with cases, too, in which the lateral curvature has been much increased by the shape of the vertebræ being altered by caries. I have also met with cases in which, from the same cause, there has been pretty complete angular curvature from side to side, and in which only a few of the vertebræ have been included.

In the most common species of lateral curvature, when the spine takes on the form of an *S*, the shape of the different vertebræ sometimes becomes altered, so as to be adapted to the situation

in the curve which they respectively hold, so that one side of their bodies becomes proportionally thinner than the opposite one. I once saw a spine in which this alteration of shape was so great, that one side of some of the bodies of the vertebræ was more than as thick again as the other. It was a dried preparation, and the cancelli had not been exposed, so that I could not ascertain the state of the bone; but I conceive, from the general appearance, that no morbid deposit could have taken place in this case.

It can hardly be necessary for me to state, that the common species of angular curvature is occasioned by the spinous processes of such of the vertebræ, the bodies of which have been destroyed by caries, or absorbed, being thrust outwards by the approximation of the sound vertebræ. There may be only one of the vertebræ destroyed, or there may be nine or ten, or more, and yet the patient recover. The condition of the intervertebral substance, or cartilages, as they are termed, is extremely uncertain, as with true scrophulous affection of the bones they are sometimes wholly absorbed, and at other times almost entire, although the adjoining vertebræ are extensively carious, as was also observed by Mr. Pott.

I believe that the cancellous structure of the ribs is often affected with scrophula, when the vertebræ are; and when the bodies of the verte-

bræ are carious, the heads of the ribs are very often found in the same state, and totally loose, or free from connection with the vertebræ. When the vertebræ have not yet become carious, but in an early stage of the disease, I have found the attachment of the ribs much loosened.

In the worst cases of angular curvature, as the curative process goes on, the natural size and shape of the spinal canal is generally preserved, so that there is no pressure on the medulla spinalis; but when patients have died at an earlier period, or during the progress of the disease, I have seen a large portion of the theca exposed, and in contact with matter which had formed in the surrounding parts.

The condition of the parts within the canal, when it remains entire, though the destruction of the bones has been very great, is exceedingly uncertain. Sometimes they are in the most healthy and natural state, and at other times they are found morbidly affected in various ways. The theca may be in a morbid condition, and there may be a thick coating of lymph to its external surface; or there may be matter collected between it and the sides of the canal. Sometimes there is fluid collected within the theca; and the membranes of the medulla are more vascular than natural. All these, and many other morbid affections of the parts in the spinal canal, may, how-

ever, occur without any destruction of bones; but when symptoms arise, indicating an unhealthy state of the spinal nerves, I believe that they are most frequently produced by a morbid condition of the vertebræ.

ON ANGULAR CURVATURE IN PARTICULAR.

Of the two species of curvature the angular is certainly the most to be dreaded: I shall, therefore, first enter into the consideration of this species of diseased spine.

The angular curvature may take place at any part of the spine, but it more generally occurs towards the upper part of the dorsal vertebræ. I have, however, seen it exist high up in the cervical portion of the spine, and also in the lumbar region. The angular curvature is most to be dreaded, because it never can exist in the smallest degree without some destruction of bone, and as the diseased vertebræ must necessarily be a source of constant irritation and disturbance to the general health. This species of curvature can never be mistaken, and must always be observed, as it occasions a positive projection from the natural surface of the back. When two or three of the vertebræ are almost completely destroyed, and the adjoining ones are in a sound

state, the projection is very direct; but when none of them are nearly destroyed, yet many are partly, and in a carious state, the projection is more gradual and much larger. When there is angular curvature laterally from unequal destruction of the bodies of the vertebræ, the spinal processes also occasion a projection outwards. With the common angular curvature there is sometimes lateral curvature of other parts of the spine.

Although in this species of the disease its existence is rendered sufficiently evident by the projection from the back, still as the vertebræ are subject to different diseases, we must have other evidence before we can ascertain the nature of the primary morbid affection in any particular case. Here we must be principally governed by what we know of the progress of the disease, of the patient's general habit of body, and by his existing state of health. The observations I have made with reference to these points, in a preceding part of this Treatise, are equally applicable to scrophulous disease of the spine, and therefore need not be repeated here.

That disease of the vertebræ most frequently partakes of a scrophulous nature my own experience sufficiently convinces me. Mr. Pott states, that disease of the spine, attended with curvature, is generally produced by scrophula. The correctness of this opinion dissections incontestibly

prove. They also prove that it is not necessarily so; and they further prove, that the spine may be extensively affected with scrophula, and several of the vertebræ not only softened in their texture, and their cancelli filled with cheesy matter, but that many of them may be extremely carious without any decided and particular curvature, or any other marked symptom of the disease. It is equally certain that a great degree of curvature may exist without any other symptom; and that there may be complete loss of voluntary power in the lower extremities, and in other parts, without any curvature at all.

I once examined a patient who was supposed to die of mesenteric disease, in whom most of the dorsal vertebræ had undergone a scrophulous change of structure, besides which six of them were extensively carious at their anterior parts, and yet he was able to walk about to the last. The caries of the vertebræ was perhaps partly produced by a large abscess, which had formed behind the plura, in the posterior mediastinum, separating it from its connexion with the ribs and diaphragm, through which it had made its way by an ulcerated opening, and discharged its contents into the cavity of the abdomen, producing inflammation of the peritonæum, and consequent death. The mesenteric glands were considerably diseased, and had formed several ab-

scesses. There was great difficulty of breathing in this case, and occasional cough, but this had been supposed to arise from the distension and tender state of the abdomen.

I also examined the body of a man, who was about thirty-five years of age, and who had when he died been confined to his bed, with loss of all power in his lower extremity, for nearly five years. There was general bowing out of the spine, but no particular curvature; and yet, on dissection, it was found that the whole of the vertebræ had undergone this morbid change, and that there was most extensive caries of the anterior surfaces of the last lumbar, and eight lower dorsal vertebræ. None of these, however, were completely destroyed. The intervertebral substances had suffered considerably, but not in so great a degree as the bones. In this case there was no morbid alteration within the spinal canal which could account for the paralytic affection.

In the early part of 1818, I examined a man who died with two lumbar abscesses. He had been for some time a patient in St. Bartholomew's Hospital with one of them, but he went out before he died. In this case the whole of the lumbar vertebræ had become softened in texture, and their cancelli were in many parts broken down and filled with scrophulous matter. Their anterior surfaces were extensively carious. Indeed, this

was to be suspected, for while he was in the Hospital several pieces of bone came away with the matter which was discharged from the abscess, which was opened while he was there. There was very little irritation excited in the nerves connected with the spine, although the vertebræ were so extensively affected.

The following case was mentioned to me by Mr. Langstaff, and the morbid parts are preserved in his very valuable Museum, where he kindly allowed me to inspect them while in a recent state, as well as many other preparations of a similar nature.

The particulars are briefly these :—A little boy, who had had for nearly a twelvemonth issues on each side of his spine for an angular curvature, and loss of power in the lower extremities, at last died of phthisis. On examination after death, most of the dorsal vertebræ were found scrophulously diseased, and several of their bodies were completely destroyed, as were the heads of some of the ribs. Anchylosis, however, was taking place ; and besides this, there was a deposition of bony matter, in the form of scales, upon their outer surfaces, so that a cure might have been reasonably expected if the lungs had not been diseased.

This case is an additional proof of what I have before stated, that scrophulous disease of the

lungs is not to be restrained by any other local disease, however extensive. It also proves another fact, to which I have before adverted, viz. that in scrophulous disease, when the curvative process has fairly commenced, there is often a deposition of ossific matter on the contiguous parts.

Mr. Langstaff also gave me the opportunity of examining the spine of a boy, in which there was almost entire destruction of six or seven of the dorsal vertebræ, and in which the connection between the last dorsal and first lumbar vertebræ, was also completely destroyed. It is evident that this disease must have existed for a considerable time, and yet the boy was walking about, and free from all nervous affection, until a fortnight before he died, when he became paralytic.

I have notes of many other cases of the same description, which I might adduce, but I consider that the preceding cases are sufficient to prove the liability of the vertebræ to scrophulous disease, and that that disease is fully capable of occasioning that destruction of parts which is essential to the formation of the angular curvature. They also prove the irregularity and uncertainty of the symptoms which are produced by this morbid condition of the vertebræ. Indeed, on this head there always must be some degree of obscurity, as the spine, like all other parts of the

body, is subject to various diseases, all of which, under certain circumstances, are capable of producing very similar effects. It, therefore, follows that, in the early stage of scrophulous, as well as of other disease of the vertebræ, it must be often impossible to ascertain the nature of the cause by which the symptoms are produced, except in those cases in which it is evident, from external marks, that the bones are the seat of the disease. Thus we may have convulsions, cramps, violent pains, and loss of power, or even actual paralysis, in parts supplied with nervous influence by the spinal marrow, when there is no discoverable disease of any part connected with the spine, or with the nerves themselves; and on the contrary, it sometimes happens, that when there is the most extensive disease of the vertebræ, there may be none of the nervous symptoms which I have mentioned above. Thus I have known persons die paralytic, or with most violent convulsions, and on examination after death it has not been possible to detect the slightest morbid change of structure in the brain, or in the spinal marrow. I have known too, complete paralysis, and the most painful nervous affection of only one arm, or only one leg, without any morbid alteration in the structure of these parts, which could be detected by the most minute dissection. Still, however, by attending to the symptoms that arise when

the spine is certainly diseased, we may often correctly judge on what the symptoms which may be present depend; but from the circumstances mentioned above, we can never be entirely certain that the vertebræ are diseased, unless there be external evidence of it.

SYMPTOMS PRODUCED BY THE ANGULAR CURVATURE.

The symptoms which usually attend this species of the disease, or the effects which this condition of the vertebræ produces, are to communicate diseased actions to, or to excite irritation in, the medulla spinalis, and nerves particularly connected with it; and to occasion inflammation and abscesses in the contiguous soft parts.

The symptoms of diseased actions going on in the medulla and nerves are, generally, constant local pain, often diffusive, but I believe commonly always greater at one spot; paralysis, more or less, of certain parts—of what parts, depends in some measure, but not invariably, on the seat of the disease in the spine—generally, however, of the lower extremities, and of the sphincters of the bladder and anus, so that the power of moving, or of directing the movement, of the legs, and of retaining the urine and fæces, is lost; diminished power in the coats of the intestines and bladder,

so that they become torpid and inactive; sense of sinking at the stomach; respiration slower than natural, with occasional interruptions; intermitting pulse, and wasting and flaccidity of the muscles of the extremities. All these symptoms, of course, vary in degree in different cases.

The symptoms of mere irritation about the medulla spinalis, or about the origin of the spinal nerves, and which are the symptoms most commonly attending the angular curvature, also depend in some measure on the seat of the spinal disease, and on its extent; are diminished power in the lower extremities, accompanied by convulsive twitchings, and irregular actions of some of the muscles, and sometimes even rigid spasmodic contractions of them, so that the foot and toes are drawn downwards, and the legs are drawn upwards and backwards, and immovably bent on the thighs, with a sense of great tightness, or constriction, round the ankles; also, wasting of the muscles of these parts, a sense of coldness and shooting pains; likewise shooting pains about the chest; a sense of tightness and uneasiness at the pit of the stomach; hurried respiration, with occasional convulsive actions of the diaphragm; and often quickness and hurry of pulse. In every case of angular curvature there are commonly all the symptoms of general debility and irritation. These, however, like all other symptoms, differ,

and are varied in degree from many contingent circumstances in particular and different cases. The actual loss of power, which happens in all these cases, in whatever degree, I should be inclined to attribute more particularly to the morbid alteration in the structure, or in the actions of the medulla spinalis itself; and all the other symptoms to the irritation of the nerves themselves. But I shall not discuss these points here, as it does not appear to me to be of any material importance with reference to the treatment, whether both parts, connectedly or separately, or only one part, are concerned in the production of the symptoms.

Notwithstanding perfect paralysis of any part does not generally occur in these cases, my own experience incontestibly proves to me, that there may be the most complete loss of sense and motion. The paralysis is not, however, occasioned by any pressure of the diseased bones, but by the accumulation of lymph, or matter, in the spinal canal, or of some kind of fluid in the membranes of the medulla. That pressure might occur from another cause is evident from the case I have adduced, in which the connection between two of the vertebræ was completely destroyed.

The inflammation and suppuration in the parts contiguous to the curvature, are clearly the effects of the morbid condition of the bones, and are produced precisely in the same way as in scro-

phulous disease of the joints. Indeed, before the curvature has taken place, I have sometimes observed the same thickening about the exterior of the vertebræ, as is met with in the external parts of the joints. I particularly observed it in two cases which terminated in angular curvature of the cervical vertebræ. In each of these cases there was diminished power in both the upper and lower extremities; but in neither case was there actual deprivation of the use of either of the limbs.

When abscesses form in these cases, they generally originate in the soft parts interiorly, or about the anterior surfaces of the vertebræ, but sometimes in the external parts about the spinous processes. There frequently is no evidence by which it can be ascertained that the suppurative process is going on, until the matter makes its way to the surface of the body, and forms what is termed an abscess. The point at which it may first appear is quite uncertain, and it often is at a great distance from the seat of the primary disease. When the seat of the disease is in any of the lumbar, or in any of the lower dorsal vertebræ, it is most common for the matter to first appear in one of the groins, either above or below pouparts ligament, but there is no certain spot, and the matter often makes its way to the surface in the loins on one side of the lumbar vertebræ, some-

times by the side of, or above, the anus, and indeed in various other situations. These abscesses generally go by the name of lumbar or psoas abscess. Nevertheless, the cause of their formation sometimes has no connection with the lumbar vertebræ, as I have known this part of the spine perfectly sound, and the whole disease in the dorsal vertebræ.

The nature of these abscesses is always readily discovered, as by applying the hand to the most prominent part, while the patient coughs, propulsion of the matter from within outwards is very distinctly felt. The quantity of matter that these abscesses contain is often enormous. I have seen five pints discharged at one time, and the discharge of two or three pints is very common.

I have already stated that the matter may make its way to both groins in the same case, and I may here add, that this may take place in both sides at the same time, and also at distinct periods, so that the matter shall descend into the second groin, while there is a free passage and vent to it on the other side. In the case to which I have alluded at the commencement of this section, there was no separate collection of matter in the loins, so that it is not easy to account for the matter making its way along the course of the left psoas muscles, when there was already a free passage along the right; but when the matter origi-

nally forms in separate parts, it is not extraordinary that it should pursue different directions, and appear successively in different situations.

These abscesses seem sometimes to form in the substance of the psoas muscles; at least, in a subject I was dissecting at St. Bartholomew's Hospital, there was a sinus running along the whole length of the left psoas muscle, which would only admit a moderate sized bougie. The muscle too, was very much diminished in size, and converted into a cartilaginous-like substance, which indeed is not a very uncommon state to find them in when there has been psoas abscess.

In this case there had been extensive disease of the vertebræ, but at the time of death it appeared that the curative process had far advanced. In the adult these abscesses, soon after they burst, or are opened, often produce great constitutional disturbance, and subsequently death; but when the general health is not very bad, and from an early stage they are treated properly, they sometimes terminate most favourably. In the child they produce much less derangement of the health, and do not much diminish the chance of the patient's recovery; at least, I have met with many cases in which they did not occasion any material injury, as the patients have subsequently perfectly recovered.

When, from disease higher up in the vertebræ,

an abscess forms in the posterior mediastinum, there is the greatest danger to be apprehended. The matter may insinuate itself in every direction; it may, as I have stated before, separate the plura, produce ulceration of the diaphragm and peritoneum, and become extravasated among the intestines; or the peritoneum remaining entire, it may separate it from the diaphragm, and insinuate itself between the different layers of its processes—a circumstance which I once witnessed in a patient who died in St. Bartholomew's Hospital. In this case, the patient's death was immediately produced by peritonitis, which ensued in consequence of the irritation of the extravasated matter. The pressure of the matter on the lungs, when it is confined to the mediastinum, often causes very distressing difficulty of breathing. In these cases the matter at last is discharged into the cavity of the thorax, and occasions a miserable death, or it makes its way by ulceration externally on one side of the vertebræ, and is continually discharging through the aperture.

There was a case of this kind which occurred in the Hospital. The patient was a young woman, under the care of Mr. Abernethy, and had been confined to her bed for several months, with a large angular curvature at the upper part of the spine, between the shoulders; and she had during the greater part of the time laboured under particu-

larly great difficulty of breathing. She was, however, materially relieved for the time, when the matter found an exit; but she died in a very short time after. Whenever she coughed, after the abscess had burst, at the times her back was exposed to dress the issues, the matter was propelled in a full stream to a considerable distance. The matter was precisely like that discharged by a lumbar abscess.

The abscesses which form at the sides of the spinous processes are generally small, and do not produce any particular symptoms. The matter they contain is such as I have described to be commonly contained by scrophulous abscesses.

I think I have as often met with this species of abscess in the lateral as in the angular curvature. It appears, therefore, that they may be produced by irritation, communicated by the interior of the bones, before caries has taken place, as sometimes happens in scrophulous disease of the joints of the extremities.

ON THE LATERAL CURVATURE IN PARTICULAR.

I have already stated my belief, that this species of curvature depends in most instances on a morbid affection of the vertebræ, and that on dissection I have found, in some cases, the parti-

cular alteration of structure, which scrophula produces in the bones, to have taken place; and I will here adduce some other arguments and facts which further confirm this opinion.

That it is very common, when a disposition to scrophulous disease is formed, for lateral curvature of the spine, with consequent and corresponding alteration in the shape of the chest, and in the relative height of the shoulder, and of the hips, and wasting of the muscles of the trunk, to occur, I conceive no one can deny, as it so frequently exists with other diseases evidently of a scrophulous nature; but the condition of the bones, and the cause of the curvature under such circumstances, are a frequent source of controversy, and are really what it is of the greatest importance to ascertain.

What is the direct cause of this peculiar curvature, and of the wasting of the muscles which always attends it, in a greater or less degree, it is impossible for me confidently to assert, but I believe the following will be found to be the most accurate explanation. It has been supposed by some authors, that the cause of the curvature is entirely in the action of the muscles, but although this may be, and most probably is, the *immediate* cause, I am much inclined to believe that the *primary* cause is in the vertebræ: that scrophulous action is set up in them, which increases

their vascularity, and softens their texture, or, in the language of the old physiologists, diminishes the density of their fibres, relaxes their ligaments, and perhaps loosens their connexions, so that the whole spine becomes weakened; that the action of the muscles, which must be constant to keep the body erect, produces uneasiness, they consequently cease to act, or at least act less powerfully than natural, and waste away; but that certain motions giving greater uneasiness than others, certain muscles waste away in a disproportionate degree, and thus the balance being destroyed, irregular actions take place, and curvature ensues.

That, however, there may be other causes I do not pretend to deny; for example, when there are two sets of muscles, if the muscles of one set are exerted more than the others, they will become of greater strength, and the balance will be destroyed, and curvature may be the consequence; but I believe this can seldom be the case, unless the body be previously in a debilitated and unhealthy state, as in a healthy condition of the muscles such irregular actions must be kept up constantly, and for a long time, before such an effect would be likely to ensue.

If we have proof, as I maintain we have, or if it be admitted that this state of the vertebræ exists, it is undeniable that the other symptoms or effects, are what we would naturally expect to

follow, for they are precisely what we witness in every other part of the body—that when a muscle ceases to be useful, or its action gives pain, it ceases to act at all, except when unnatural actions are produced, as spasms or convulsions. That the vertebræ are sometimes softer and more vascular than natural, without any morbid deposit, I have already proved; and indeed every surgeon must admit it, for every Museum will shew bones, and particularly vertebræ, deprived of their earth, and very much lighter than natural, without having undergone any other morbid alteration. I have also proved that such is the state of the bones in the early stage of scrophulous disease; and it appears probable at least, that whenever the scrophulous diathesis is strong, many, and sometimes the whole of the bones are softer and more vascular than in health, and deprived of much of their earth. This is not mere conjecture, but I have, on dissection, found the whole of the bones in this state; and Mr. Langstaff informed me, that he has preserved in his Museum the bones of a child, all of which had undergone this change. It is the more probable too, that such a morbid alteration always takes place in the vertebræ before the lateral curvature is produced, because in the end the bones sometimes undergo complete scrophulous change, and in a manner decay, or become carious, and abscesses form as

in the angular curvature, or the angular curvature is itself produced.

In the sequel, I shall adduce cases proving these points. I have at present a child, who has been lately placed under my care, with angular curvature and lumbar abscess, who had had lateral curvature for nearly two years before the other affection made its appearance. A strong argument in favour of the opinion I am contending for, may be deduced from the condition of the spinal canal, as found on dissection in some cases of lateral curvature. I have met with large effusions of lymph within the spinal canal, sometimes forming a complete coating to part of the theca, or there may be a collection of lymph and pus, or fluid collected between the membranes of the medulla spinalis, where no other cause could be assigned, but the irritation communicated by the morbid condition of the bones. I recollect examining a man, who died in St. Bartholomew's Hospital, of paralysis of the lower limbs, and of the sphincters ani et vesicæ, in whom there was found on dissection, a considerable quantity of pus in the spinal canal, a coating of coagulable lymph to nearly six inches of the theca, and a collection of a serous fluid between the membranes, with the morbid state of the bones which I have described. The following case, too, is strongly confirmatory of this point. It occurred in a child, aged four years

and a half, whom I examined, in conjunction with Mr. Worthington of Chester, who was my colleague the first year I was house-surgeon of St. Bartholomew's Hospital. The child died of complete paralysis of the lower extremities, and had lateral curvature of the spine, with great alteration in the shape of the trunk. On dissection, there was found a coating of lymph along nearly the whole length of the theca, and a considerable quantity of water between the membranes, indeed so much, that I recollect it spirted out with some force directly the theca was opened. The vertebræ were so much softer than natural, that they could be easily cut with a scalpel, and extremely vascular, but there was no morbid deposit. That in these cases the morbid condition of the bones was the cause of the other mischief I cannot doubt, neither can I that it was of scrophulous origin, for such an affection of the bones completes the analogy between the effects of scrophula in the bones and other parts, viz. increased vascularity and consequent inflammation in parts contiguous, or increased vascularity, and consequent deposition of a peculiar matter, and gradual destruction of the natural texture, all changes which we so often witness in the lymphatic glands from scrophula.

The symptoms which often attend upon this affection of the spine clearly indicate that there

is some other cause of local irritation than the mere curvature. The symptoms, indeed, are sometimes as severe as those which accompany the angular curvature, and evidently arise from the same cause, viz. irritation communicated to the medulla spinalis, or its nerves. Thus I have observed among the symptoms occasionally attending these cases,—severe pain in the back; total or partial paralysis of the lower extremities; shooting pains along the intercostal nerves, or those of the extremities; twitching of the muscles; difficult or hurried respiration, or what is understood, by short breathing; convulsive action of the diaphragm coming on occasionally; and involuntary discharge of urine; and in one case, as I have stated before, involuntary discharge of the fæces. More frequently, however, there are only the common symptoms of debility, with pain in the back and head, and some other indications of nervous irritation, as occasional convulsive twitchings and pains in the lower extremities.

That these symptoms are not produced by the curvature is certain, because, in this affection, as in the angular curvature, all the symptoms of irritation may be removed, although the curvature remains as great as ever; but that they are produced by a morbid condition of the vertebræ is at least probable, because, as the peculiar state of

health which I maintain always precedes and attends such a morbid affection of the bones is removed, and of course, at the same time, the disease in the vertebræ, all symptoms of irritation subside, so that the patient may continue for many years after free from all inconvenience but what arises from his lamentable deformity.

The curvature, of course, must remain to the end of life, notwithstanding the scrophulous state of health has long ceased, unless proper means are employed to remove it, from the unnatural condition and disproportionate strength of the muscles of the back. It follows, therefore, that when a patient dies under these circumstances, the original affection of the bones having been removed, if the vertebræ be examined, they will be found of their natural and healthy structure; and this appears to have given rise to the opinion, that this species of curvature takes place independent of any morbid condition of the vertebræ. The most frequent opportunities, too, that we procure of examining the condition of the vertebræ, in these cases, are after the curvature has existed for a long time, so that to ascertain the true nature of the disease is very difficult.

SYMPTOMS INDICATING A DISPOSITION TO CURVATURE.

In the first part of this Work I have stated, that it is always important to acquaint ourselves with the nature of a disease in its earliest stage, and I may here add, that in no disease can it be of greater importance than in disease of the spine. Both the species of curvature of the spine are preceded by very similar symptoms; but, like all other scrophulous diseases, this affection of the vertebræ often comes on so gradually and insidiously, that it is not at all suspected till even angular curvature has actually taken place. Nevertheless, at other times, urgent symptoms of spinal disease exist for a long period without any apparent affection of the vertebræ, and yet in the end curvature takes place. The following is a very strong instance of this kind:—A poor man, while in America, lost the use of his lower extremities, but after having been confined to his bed for several months, he partly recovered their use, and subsequently became so well as to be able to return to this country. His legs, however, remained so weak that he could not walk without the assistance of a stick; and in this state he continued with very little variation for nearly nine years. About this time I saw him, when he

had become much worse; indeed, for the last two years the lameness had been so gradually increasing, that he could not stand without keeping his legs very far apart, and when he moved, and put one leg before the other, he was obliged to set it down with the greatest rapidity, or he lost his balance and instantly fell down. He complained of great coldness in both legs, and of pain in his ankles. On my asking him if there was any thing the matter with his back, he replied, no; and he informed me that several medical men had examined it, and that they had declared that it was quite straight; and as his wife also informed me, on my questioning her, that there was no lump on any part of it, I did not examine it at that time, but about three months after, he one day requested me to examine his back, as he thought it was growing out. I accordingly examined it, and found that the spinous process of one of the lower dorsal vertebræ was projecting considerably beyond any of the others, and that the whole of the superior part of the spine was gradually bowing to that point. Now, from the most accurate information I could acquire of this case, it appears that till about a month before this period the back was perfectly straight; and this is the more probable, as since that time he has very much recovered the use of his limbs, by keeping a large surface of the back constantly sore, and

copiously discharging, by applying the tartar emetic ointment. This case, like some of the others I have adduced, is extremely important, as shewing the connection between a certain set of symptoms, and a morbid condition of the vertebræ, although there may be no other evidence of such disease.

Notwithstanding there is so much irregularity and uncertainty in the general symptoms which precede curvature of the spine, still there is a local symptom which, I believe, invariably precedes this affection, viz. the wasting of the muscles of the back. This condition of the muscles is commonly evinced in children, by their stooping or bending their head more forward than is natural; or when sitting, by their always raising their shoulders, and keeping their bodies bent forward; or by their constantly sitting or standing with one shoulder elevated above the other; or by their always lolling or leaning when sitting down. If the back of a child be examined, under these circumstances, the spinous processes are usually found much more prominent than natural, and there is a deep fosse on each side of them; and this is occasioned by the great and particular wasting of the muscles of the spine; but as I have observed before, the wasting is often much more considerable on one side than on the other. That such a condition of the

muscles generally exists antecedent to curvature taking place I fully believe, as in several instances I have been able to prove it by actual observation; and because I have always witnessed it when I have seen patients soon after the commencement of the curvature.

The angular curvature must be noticed directly it exists in the slightest degree; but I have often known the lateral curvature take place to a considerable extent without its being noticed by the friends of the patient. An alteration in the relative height of the shoulders is the symptom which generally first attracts attention, and this is commonly ascribed to nothing more than to the child having acquired an awkward manner of carrying itself; but if at this period we make the necessary examination, we generally find, as I have stated before, that there is a corresponding alteration in the relative height of the hips, and that the spine has taken on, more or less, the form of an italic *S*. There is also a corresponding alteration in the form of the chest. It is common, too, for one of the blade bones to project farther from the trunk than the other, or to grow out as it is usually expressed, and this is partly owing to the altered shape of the chest, but much more to a species of paralysis, or relaxation, of the muscles of the scapula. I have seen two cases in which the muscles, and parts connecting the

scapula to the trunk, were in such a paralytic and flaccid state, that I could place the greater part of my hand between it and the ribs. These patients perfectly recovered, and the cases will be more particularly related in a subsequent part of this section.

This wasting of the muscles of the back cannot often be mistaken for the wasting which ensues in consequence of general emaciation, because there is then equal wasting of the muscles of the whole body, which is certainly not commonly the case at the commencement of spinal disease, although at a later period of the disease they are frequently extenuated to the greatest possible degree. The other symptoms which sometimes precede or attend the commencement of curvature of the spine are, occasional pain in the back and legs; numbness and twitching of the muscles of the lower extremities; a sense of weakness in the back; shortness of breath; and that delicate state of health, and the other symptoms of general debility, which I have described as always accompanying, in a greater or less degree, every species of scrophulous disease.

ON THE TREATMENT.

In diseases of the spine, the constitutional treatment is undoubtedly of the highest importance; but as it differs in no essential respect from the directions I have already given for the treatment of scrophulous disease in general, it is not necessary for me to discuss that part of the subject in this place. Having commenced with the consideration of the particulars relating to angular curvature, I shall first describe the treatment of this species of the disease.

As in the smallest degree of angular curvature, there always must be destruction of some part of the vertebral column, the importance of a state of rest, and of a reclining posture, must be at once perceived. They are, too, particularly indicated, because all motion of a diseased part is invariably found to do mischief; and because in such a state of disease, the spine must necessarily be too weak to afford that resistance to the actions of the muscles which is required to preserve the body in an erect state, or to support the superior parts of the body, without positive injury to those vertebræ in which the destructive process is going on. Strict attention to these points will also very much prevent, or at least diminish, all those secondary effects which are

so commonly attendant in this morbid condition of the vertebræ. A great degree of deformity, too, which would otherwise take place, will be prevented, particularly the general bowing out of the spine above and below the curvature, which so frequently ensues, and which commonly makes the greater part of the projection. Indeed the advantages to be gained by constantly keeping the patient lying in an horizontal position are so great, that it should always be considered an indispensable part of the treatment. How long it may be necessary, in particular cases, to enjoin such a complete state of rest, it is not possible to define; but as a general rule it may be stated, that it is better for it to be persevered in, till all those symptoms of irritation which appeared to be produced by the diseased vertebræ have subsided.

After patients have been thus confined, when first they are permitted to get up, it is always advisable to afford a certain degree of support to the back, as otherwise after this period the general curvature very much increases. The means it is necessary to employ for this purpose will be described in the treatment of lateral curvatures.

I have stated that the patient should be kept constantly lying in an horizontal position, but this is not all that it is of necessity to attend to: he should also constantly lie on his back, and with his head on the same plane with his body. His

legs, too, should be kept quiet, and always lying in the same direction. These circumstances may be thought trifling by persons who have not had much experience in these cases, but they are really of considerable importance, because, without attending to them, as every anatomist must well know, the whole of the muscles connected with the back can never remain in that state of perfect inaction, which is most conducive to a speedy recovery.

The next point of importance in the treatment of angular curvature is, the adoption of some method by which continual counter-irritation can be kept up near the part affected, and with as little disturbance to the patient as possible. For this purpose, issues or setons are generally employed, and they are both equal to the end; but, on the whole, I prefer issues, as they may be increased or diminished in size, according to circumstances.

In the establishment of issues, I should not expect to remove the caries of the vertebræ, or to induce reparation of bone, as these ends can only be gained by amendment of the general health, but to prevent irritation from being excited in the contiguous parts, or to remove it if it already exists. That they are of the greatest service in this way is clearly illustrated by the cessation of the pain in the back and legs, and of all the other symptoms of irritation, as we so often witness,

almost immediately after their establishment. Their influence in this way is also proved by the effect they have in restraining the formation of matter, or in promoting its absorption, or in diminishing its secretion, in abscesses connected with diseased vertebræ. Some of the cases I shall adduce will be illustrative of these points.

I should therefore invariably recommend the establishment of issues at the first appearance of angular curvature, although there may not exist any paralytic affection, or other symptom of irritation; and particularly to guard against the formation of abscess, as, whenever suppuration takes place in the parts immediately in contact with diseased bone, the caries, as I have remarked before, always proceeds much more rapidly, and the period of recovery must be, at least, much more protracted.

Moreover, the benefit derived from issues is not merely local, but the general health is often very much improved soon after they are made. By Mr. Pott, this improvement of the general health was ascribed to the discharge of purulent matter which they occasion; but this is a cause that I believe no physiologist of the present day will consider in any way adequate to such an effect. The true explanation of this point appears to be, that, by relieving the local irritation, what had been a source of constant disturbance

to the whole system is removed, and the general health at once improves, as after the amputation of a limb, on account of some disease, which had long been the principal cause of a high degree of constitutional disorder. It can hardly be necessary for me to observe, that if the discharge of matter possessed any power of controuling the specific disease, or of specifically benefiting the general health, we ought not to see, what we really witness every day, the same disease appear for the first time in some other part of the body during the continuance of the discharge; nor ought we, as is too often the case, to observe the health daily becoming worse, while there is a copious discharge of matter from some abscess, or from the issues themselves. It might, à priori, seem probable that, by exciting a great disposition to form matter in one part, you would diminish the disposition in another; but, perhaps, even this is allowing too much of a specific influence to issues, as we so often see several abscesses form at the same time in different and distant parts of the body. Perhaps, too, the continual discharge of matter from the issues may relieve local irritation in these cases, in the same manner as the abstraction of a certain quantity of blood, by the daily application of a leech, relieves the pain and irritation of a diseased joint. I may observe that no such benefit, arising from the discharge of an

abscess, connected with diseased vertebræ, is no argument against the admitting such a local beneficial effect to be produced by the discharge from issues, because, in such cases, the matter being in contact with the bones is, as I have stated before, a source of greater local disease, and consequently of additional constitutional disturbance. I shall not, at present, insist further on the validity of these opinions, as the only questions of primary importance are,—Whether, in this species of curvature, issues are generally useful? and under what regulations they should be employed?

Having already stated my belief that issues are always beneficial in angular curvature, and my reasons for that opinion, and that I shall adduce cases to prove its validity, it is not necessary, in this place, to offer any additional observations on the first question. With respect to the second, only general rules can be given. We should be careful not to make them so large as to become a source of general irritation; and below this point their size must vary according to the different ages of different patients, and according to the apparent magnitude of the vertebral disease, or the urgency of the secondary symptoms. How long they should be kept open in particular cases it is impossible to define; but it is generally right not to allow them to heal till some time after every symptom of irritation, and secondary dis-

ease, has subsided. In general, it is better to make them as near the most prominent point of the projection as possible, as at that spot the bones are commonly in the state most conducive to suppuration in the contiguous soft parts.

I have stated, that it is very common for abscesses to form in connection with angular curvatures, and also before any curvature has taken place, as a first symptom of vertebral disease. I should, therefore, always establish an issue, or make use of some other counter-irritant, directly an abscess forms, which is in any way connected with the spine.

When any of those abscesses termed psoas, or lumbar, exist, I should always make the issues at the upper part of the lumbar vertebræ, unless there was some other spot at which pain was particularly felt. In other cases, or when matter makes its way outwards on one side of the vertebræ, I should establish the issue on the other side directly opposite.

On the whole, I believe it is better to delay opening these abscesses as long as possible, for when the collection of matter is very great, it is often wholly absorbed. The mode of opening them, which I should adopt, is according to the directions given by Mr. Abernethy, which it is unnecessary for me to repeat here.

One of the cases which I have brought forward

to shew the state of the vertebræ in scrophulous disease, and which was attended by two psoas abscesses, very clearly demonstrated the efficacy of issues in restraining the secretion of matter, and in preventing the disease in the bones from communicating irritation to the contiguous parts; for when the issue was established, the pain in the loins and thighs, which had been very severe, at once subsided, and the secretion of matter very much diminished; but on the issue being healed too soon, from the impatience of the patient, the symptoms of irritation all returned, and a fresh abscess formed. The preceding points are also further proved by a case I am now attending. The patient is a little girl, about five years old, of dark complexion, hair and eyes, who has a very large angular curvature about the middle of the spine. An abscess formed, and burst, in her left groin, from which an enormous quantity of matter was discharged, yet as soon as an issue was established, the secretion of matter entirely stopped, and the opening closed; but subsequently, the issue being allowed to heal, a fresh collection of matter took place.

I have known instances in which, though the issue has had no effect in promoting absorption of matter, yet as soon as the matter has been let out, all further secretion has been prevented, and the case has gone on as if no abscess had formed.

The matter which these abscesses discharge is very similar to what I have described as being commonly contained by scrophulous abscesses in general, but on the whole, as might be expected, it partakes more of a purulent nature.

When matter forms in the posterior mediastinum it is often impossible to detect it, and it is quite uncertain at what point it will discharge itself; but when it makes its way externally, there can be no doubt about the propriety of making an opening to evacuate it the moment it is discovered, to prevent the possibility of its bursting internally. It would be desirable, if there were any marks by which the nature of these cases could be ascertained before this period, as then an opening might be made to let out the matter with a greater chance of success; but from what I have witnessed, I fear there is, generally, too much obscurity in the symptoms, to enable us to judge with sufficient precision.

I have already adduced cases to prove the nature of scrophulous disease of the spine, and the following cases will further illustrate the symptoms and cure of the angular curvature. As long details are always tedious, the cases are stated as briefly as possible, and only such circumstances mentioned as are of principal importance.

A young man, aged twenty-three, suddenly

lost the use of his upper extremities, and about a week after, of his lower. His breathing at the same time became hurried, attended with frequent twitchings, and there were shooting pains in the direction of the intercostal nerves. The account he gave of his case was that a few months before he hurt his back, but not so much as to make him pay any particular attention to it at the time, nor afterwards, till he lost the use of his limbs.

When I saw him, which was not for some months after this happened, on examining the spine it proved that there was slight angular curvature at the upper part of the dorsal vertebræ, and by pressing on either side pain was produced, so that it was evident destruction of the vertebræ had taken place. He was, therefore, laid completely on his back, in an horizontal position, and an issue was made on each side of the curvature. In less than a month after the issues had been established he greatly recovered the use of his upper extremities, and the difficulty of breathing, and the pains in the chest almost entirely subsided; but the paralysis of the lower limbs still continued. This patient, however, got perfectly well after having lain in bed twenty three months; the issues being kept open the whole time. In this case no medicines were made use of but such as tended to regulate the action of the bowels, and the quality of the

evacuation. This patient had had scrophulous abscesses in his neck; and some of the ulcers were unhealed at the time of the attack of the spinal disease, but they all healed during his confinement, and the state of his general health greatly improved.

The next is the case of a little boy, who had every appearance of being highly scrophulous, having enlarged glands in his neck, pallid countenance, and tumid belly. He had been observed to get weak for nearly twelve months, and at last lost the use of his lower extremities. On examination it proved that there was angular curvature about the middle of his spine. Issues were, therefore, made on each side of the projection, and he was placed on his back, and his lower limbs kept perfectly straight. He was put on milk diet, and mild aperient medicines given him to regulate his bowels. This plan was pursued for eleven months, when, having recovered the use of his limbs, and being much better in health than when he began it, he was allowed to get up. The issues, however, were kept open for six months longer. I saw him some time after this, when he was quite well and strong, but the curvature was certainly greater than when he was lying down, which shews the necessity, or at least the propriety, of continuing the horizontal position, or of giving some support to the spine for

some time after all symptoms of disease have subsided.

The following case, connected with inveterate scrophulous disease, fully proves the efficacy of this plan of treatment.

A young woman, aged nineteen, lost the use of her lower extremities, after having for nearly a year felt weak in them, and occasional pains and twitchings. She had also laborious breathing and occasional cough. Upon inspecting her back it was ascertained that there was very evident curvature of the upper part of the dorsal vertebræ. Setons were, therefore, made on each side of it, and the usual constitutional treatment adopted. This patient had also had for some time scrophulous ulcers on different parts of her body, and a scrophulous affection of her left wrist, all of which were still as bad as ever. To the ulcers simple dressings were applied; and to the carpus, as abscesses had formed, a bread and water poultice, and at the same time the arm was supported by a sling. This treatment was pursued for nearly a twelvemonth without any material benefit being derived, and she did not recover the least power in her limbs; but from that time her health began to improve, and before the expiration of the second year she had wholly regained the use of her limbs, and all the other scrophulous disease had subsided, except slight

enlargement of the carpus, and weakness of the fingers of the same limb. I attended this patient under the direction of Mr. Abernethy, in St. Bartholomew's Hospital.

The following is also a case in which the scrophulous diathesis was very strong, and yet the disease of the spine subsided:—

A little boy, eight years old, who had for nearly three years suffered severely with scrophulous affection of some of the glands, of his elbow joint, and of both his metacarpi, and of two of his fingers, gradually lost the power of his lower extremities, but never completely. He had pains about his chest, and difficult respiration. For some time previous to his losing the power of his limbs his back had been observed to grow out, and when I saw him it was too evident, as a complete angular curvature of the upper part of the spine had taken place. A seton was therefore made on each side of the projection, and the boy was ordered to be kept constantly lying on his back, and he was treated in every respect according to the plan I have laid down. By the use of these measures his belly, which was before very tender and much enlarged, became much reduced in size, and free from pain, and all the other symptoms were very much relieved; and, subsequently, he gradually improved in every respect, and has recovered the power of his limbs.

One seton, however, is still kept in, as the disease has not entirely subsided in the elbow and hands. It is now above two years since the setons were first inserted, and although he has been lying in bed the whole time, he is now quite fat, and apparently in the most perfect health.

I might also relate in detail, the case of a little girl, aged five years, of a highly scrophulous habit, who had an angular curvature at the upper part of the dorsal vertebræ, attended by violent convulsions, twitchings of the lower extremities, and darting pains in her chest; but it will be sufficient to state, that in this case issues were immediately implanted on each side the curvature, and that in less than a fortnight afterwards the twitchings and pain were almost wholly relieved, and that she was soon able to walk about with very little difficulty. The same means, however, were pursued for nearly a twelvemonth, when she was perfectly recovered.

The following is a case of lateral curvature; but the particulars of it are related here, as lumbar abscess was connected with it:—

A little boy, between nine and ten years old, had lateral curvature of his spine, and great loss of power in his lower extremities, and a short time afterwards a lumbar abscess appeared in the right side, between the ilium and ribs. This having enlarged to a great size was opened, and

about fourteen ounces of a complete scrophulous matter were discharged. The aperture was healed by the first intention, but the abscess partly filled again; nevertheless, the matter became absorbed, and in less than ten months he appeared to be quite well, being entirely free from pain, and having regained the use of his limbs: they were, however, weak, and he complained that he could not jump off the ground in the least. The plan of treatment in this case was precisely the same as in the others, except that counter-irritation was made by means of perpetual blisters, which were applied to the back, instead of issues or setons. I met this little boy a twelvemonth afterwards, when he told me that he was quite strong, and that he could jump off the ground as well as ever he could.

That many cases of angular curvature would recover without such strict attention to rest and position, as was observed in the preceding cases, I am fully aware; but this is, as I have stated before, no argument against the necessity of employing such means, as when they are not attended to, the chance of recovery is always less, and a great degree of deformity invariably remains, which would otherwise have been prevented.

Having briefly treated of those points which are particularly applicable to angular curvature,

I shall make some observations on spinal disease in general, in connexion with the treatment of lateral curvature.

TREATMENT OF LATERAL CURVATURE.

In the treatment of this species of curvature of the spine, when the symptoms of irritation about the spinal cord, or its nerves, are not great, and there is no reason to suspect any actual disease of the vertebræ, attention to the general health, and the reclining position, are the principal, or at least the first points it is necessary to attend to. A great deal of assistance, however, may be always derived from the judicious use of stimuli, by means of friction and otherwise; and, indeed, in no case should I consider myself justified in omitting this part of the treatment. But when the pain in the back is very great, or there is much irritation about the nerves, or there is reason to suspect actual disease or caries in the bones, we ought immediately to have recourse to the more powerful counter-irritants, as issues, setons, perpetual blisters, or the tartar emetic ointment. In such cases the occasional abstraction of blood, by cupping or leeches, is also sometimes extremely useful. When friction is employed, it should be made use of from half an

hour to an hour, once or twice a day, according to circumstances, and at the same time we should apply some stimulating liniment; simple friction, too, is highly serviceable after the curvature is removed, in giving tone and strength to the muscles. It is also highly advantageous for the patient to be clothed in flannel from head to foot.

In cases of this description, where the curvature is great, or there is indication of much disease, it is always of the utmost importance to keep the patient continually lying down, day and night; and as it is very common for the vertebræ of the neck to partake of the affection of the rest of the spine, and for the head to be permanently drawn more forwards and to one side, it is equally important, in placing the patient in an horizontal position, to keep the head in the same line with the rest of the body, and on the same level; and for this reason it is necessary for the patient always to lie without any pillow or bolster. If these points be not attended to it will be in vain to attempt to remove the deformity, for without such attention it will be impossible to preserve the muscles in that state of complete inaction which is essential to perfect recovery; or if the head be elevated above the level of the trunk, it will always be found, during sleep, more or less turned to that side which must necessarily increase the deformity.

The contraction and apparent condensation of the sterno-cleido-mastoideus muscle, which generally take place when there is much lateral curvature of the cervical vertebræ, and the continuance of which must of necessity prevent the cure, always wholly subside if complete rest be persisted in for the requisite time.

In my description of the condition of the muscles of the back, in this affection of the spine, I have stated that there is general wasting of the muscles, but that the wasting of some is greater than of others, by which the balance of power is destroyed; and, I may add, that from the change in the form of the spine their natural sphere of contraction becomes altered, which must indisputably tend to prevent the removal of the deformity. The importance of a state of complete rest must therefore be obvious, as there are no other means by which we can restore the equilibrium of the muscles, or reduce them to that degree of general and equal relaxation which is most conducive to the reduction of the curvature. How this is to be effected is well illustrated by the wasting of the muscles of a fractured limb. Every medical man of observation, who has had the care of such cases, must have noticed that the wasting takes place to a great degree very speedily, but that beyond that point, except under particular circumstances, the wasting is so

gradual that its effects are subsequently hardly discoverable, unless the cure of the case is much protracted. Now, so it is with the muscles of the back; by retaining the whole of the body in a state of perfect quietude, the wasting of the muscles, which were before partial, becomes general and equal, and the balance of power is restored. The muscles being brought into this state, if the same means be still pursued, that inherent power which the body naturally possesses, of adjusting what is out of order, when no opposing cause interferes, will be efficiently exerted to restore the original shape of the spine. That this will certainly be the case, the facts which I shall adduce will sufficiently prove.

It is a common practice among Charlatans to attempt to cure spinal curvatures by pushing and pulling at the spine: now it must be evident to any one who attends to the condition of the parts in these diseases, that such attempts cannot possibly be of the least benefit, and that in many cases they must be most injurious—even to the endangering of the patient's life. When, in recent cases, the immediate cause of the curvature is in the irregular action of the muscles, it is clear that any attempt, which is not permanent, to pull the spine straight, must not only be useless but tend rather to increase than diminish the curvature, as the force must act as an injurious stimulus,

by being principally applied to those muscles which are already in a state of too great contraction; and because, as it is well known, every excitation of a muscle invariably produces a still greater disposition to contract.

In other cases, when the curvature depends on alteration in the shape of the vertebræ, it is obvious that no pulling or pushing can be of the least benefit: and in cases depending on caries, it is equally obvious that such means may produce the most melancholy and fatal consequences. It is therefore certain, that the use of such measures must indicate the grossest ignorance of medical science, and of the laws of the animal economy in general, or the most impudent chicanery.

Although every attempt to elongate the spine by pulling, or to straighten it by pressure, must be either useless or injurious, much assistance may always be derived in lateral curvatures from artificial means of steadying and supporting the spine. Thus, when the curvature is slight, or the patients are convalescent, and it is of importance to attend to their education, or where the deformity is evidently subsiding, and air and exercise are considered necessary for the improvement of their general health, the being up and about for a certain period every day, will not be at all incompatible with the perfect restoration of shape, if at the same time the necessary support be afford-

ed to the spine. In the first instance, however, the state of complete rest which I have enjoined, should never be dispensed with; because, though in some cases it may not be absolutely indispensable, yet in every case it must most materially expedite the cure.

How long it may be necessary to pursue this part of the treatment it is impossible to define, as it often happens that one patient will be double the time in recovering that another will. There are, however, certain circumstances which will generally enable us to decide when it is allowable to relax our measures; as the subsidence of all the symptoms of spinal irritation, the patient improving in health, and evidently gaining strength, and the muscles of the back increasing in size, so that the vacancy on each side of the spinous processes begins to fill up; but there is no period, however long, at which we can be justified in remitting any part of the treatment, unless these symptoms of renovation previously appear.

To give the necessary support to the back when sitting down, it is only requisite to have a small chair, with a kind of crutch attached to each side of the seat of the chair, which shall press in the most gentle manner against the ribs in the axilla, the arms of course hanging over them. It is necessary too for the crutches to be made so that they can be elevated or depressed

at pleasure, as it is sometimes, though but seldom, desirable to have one side more elevated than the other. The heads of the crutches, too, should be made to turn round, so that, if necessary, they may be applied as an equivalent to a backboard, to keep the shoulders back. Nothing, in my opinion, can answer better than this simple contrivance; it neither produces pain nor uneasiness; indeed, it preserves the back so straight, and so completely supports it, that it is by no means an unpleasant mode of sitting.

When it is determined that a patient shall make use of exercise, I have invented an apparatus which affords the necessary support to the spine. Crutches, such as I have described before, should be made use of; but as there is no chair to rest them on, they are to be fixed to two pads, one above each hip, which must be confined to their situation by a slight spring behind, and by a soft leather strap before. These crutches too are so constructed, that they can be easily lengthened or shortened. They may be applied under the common dress without the least inconvenience; or they may be applied over it, and a great coat or a cloak worn with them; so that in either case, no stranger can have the least idea of their being any thing on more than common. They do not either at all impede progression, nor do they produce the least uneasiness; indeed, like

the chairs to any one who is at all weak in the back, they are rather comfortable than otherwise. Of course, if it be thought adviseable, in any case, to afford any particular or additional support to the front or back of the body it can readily be done, as it is really amazing how little is sufficient, when judiciously applied, to give the body a particular direction, and to keep it there ; but such means can hardly ever be necessary, for if they be required it can never be right to allow a patient to walk about.

Most of the stays used for supporting weak backs act on the same principle; but to be efficient it is necessary to wear them so tight, and constantly, by which they restrain the action of the respiratory muscles so improperly; they also occasion so much pressure where it may be exceedingly injurious, and are so troublesome to put on and take off, that I have never seen any which I could consider myself justified in recommending.

When the vertebræ of the neck are affected it becomes necessary to support the head, and various machines have been invented for that purpose; and perhaps all of them are sufficient for the end. All, however, that I have seen are very clumsy, and far too heavy to be worn with propriety, and particularly what is called the Cheshire. The apparatus that I consider the best is constructed on the principle of the old steel collars,

which are supported on a pad fastened to some part of the back, and connected to the crutches which support the spine. To the brim of the collar a lunated portion of steel is attached, behind and before to each of which there is a strap, the one for the back of the head to rest on, the other to support the chin. This answers every purpose, and may be made so neatly, that when a person is dressed for walking out, it can hardly be perceived.

Instruments constructed according to the preceding directions may be procured by applying to Mr. Lawrie, of St. Bartholomew-Close, whom I generally employ for purposes of this kind.

I am perfectly aware that a great prejudice exists among medical men against the use of every kind of machinery in distortion of the spine, and indeed in other cases of deformity, and perhaps with great justice; as so much mischief, and indeed such fatal effects, are so often occasioned by the violent measures of quacks and shampooers, who profess to cure these complaints, without possessing the slightest knowledge of the diseased, or even of the healthy structure of the body, and who are, therefore, so totally incapable of discriminating between the proper and improper time of making use of the remedies, and of the true object in applying them.

Nevertheless, to object to the use of machinery,

and of such means to support the back, as have been described above, in cases of lateral or other curvature, where there is no destruction of parts, must shew at least as much ignorance as to make use of it with other objects, and in cases of a different description. I must, however, repeat here, that no attempt is to be made to screw up or to elongate the spine by any measures whatever, but that all which is to be attempted is to take off, as much as possible, the weight of the superior parts of the body from the spine, and to give it the necessary inclination to this or that side, according to circumstances, and this only in particular cases. The apparatus I have recommended can neither be objected to, on account of any pressure it makes, nor on account of its weight; because the pressure is so slight, and is made on such parts, and in such a way, that it cannot possibly be injurious; and because it is so light, that it may be worn without inconvenience by an infant, the whole apparatus for a child of twelve years old not weighing more than a few ounces. I may remark here, that the deformity of the chest will always subside as the curvature of the spine diminishes, and that any attempt to remove it, by pressure made on the ribs, or other means, may be attended by the most serious consequences, and cannot be of the least benefit.

By strict attention to the preceding plan of

treatment, and by machinery constructed and applied according to the principles which have been laid down, I feel confident that every case of spinal deformity, not depending upon actual destruction of the bodies of the vertebræ, may be certainly cured, and I should not doubt of success even when the disease has existed for several years. Indeed, where the vertebræ have become altered in shape by irregular compression, I should not despair; for, from what I have witnessed in the recovery of the greatest deformities of the other bones, I have no doubt but that, if the pressure of the superior parts be taken off, they will speedily recover their natural shape. Let me ask here, what good would be derived, if even it were possible, by pushing or pulling, for a certain time every or every other day, to make the spine straight, so long as the vertebræ are altered in shape? It must not, however, be supposed that I mean to state, that at the commencement of lateral curvature, or in slight cases, there is any alteration in the shape of the vertebræ, because I know there is not; but even in these cases, if the back were pulled straight to-day, it would be again awry to-morrow, if the condition of constitution which originally produced it be not removed by appropriate attention to the health. This is not mere conjecture, but really the case, I am certain; because I have known instances of

patients very soon after they have been cured by the reclining position, becoming again deformed. Nothing either could more strongly than this prove the necessity of employing proper constitutional treatment with the other means in every case, and the propriety of giving a certain degree of support to the spine for some time after recovery.

Notwithstanding cases of this complaint, when treated properly in an early stage, very soon recover, and that perfectly; yet it often occurs, that in this stage we are prevented from making use of the requisite means; as, the curvature being slight, the parents cannot be convinced of the necessity, and are therefore naturally enough unwilling to place so much restraint on their children, and particularly when it is an infant that is the subject. The following is a striking case, illustrative of these and some other points :—

A few years ago I was consulted about an infant, whose lower extremities had become nearly motionless, and who was altogether ill. On examining the back of the child, I ascertained that there was considerable lateral curvature of the spine, as well as great wasting of the muscles. I therefore ordered the back to be rubbed with a stimulating liniment for half an hour, night and morning, and the child to be kept constantly lying down as straight as possible. The child, however, being in arms, this could not be effected

without some contrivance. A narrow basket was therefore made for it; in which it was constantly kept lying, both when in doors and out in the air. I also prescribed some alterative powders. This plan was pursued for some time with evident amendment, the child gaining power in its legs, and the curvature getting less; but at this period it was taken into the country with the rest of the family for change of air, so that I discontinued attending it. The same plan, however, was pursued for some time longer, and the child was rapidly recovering, when it was examined by a medical man at Highgate, who declared there was nothing the matter with the back, and laughed the mother out of having it carried in the basket.

When the family returned to town I again saw the child, and found it certainly much better, and with the use of its limbs much greater than when I saw it before; but on examining the back, declared my conviction that there was still curvature. The mother, nevertheless, being satisfied that the child was much better and gaining strength, paid little attention to it, and some of the relations also declared that they could not perceive any kind of deformity. A few months ago, however, this child, now between four and five years of age, was brought to me with considerable distortion of his spine, and corresponding alteration in the shape of the chest, and

with symptoms of general debility, and great wasting of the muscles of the back. I put him on the plan of treatment I have described, and he is going on quite as well as could be expected in such a protracted case, and has already much improved.

This case is important, as it proves the difficulty there is of discovering the curvature when it is slight; also, by proving the complete state of paralysis that this species of curvature will produce, for this child did not regain the use of his legs till some time after children usually walk; and also by proving what mild means, conjoined with perfect rest, are capable of removing the worst effects. I ought to mention that several individuals of this family are highly scrophulous, and that the father died of phthisis.

The following cases will further illustrate the treatment and nature of this complaint. The first case particularly shews that abscess may form in this species of curvature, and yet the matter all become absorbed, by pursuing the plan of treatment I have recommended.

In November, 1818, I was consulted about a young lady, aged seventeen, who was suffering very severe pain in the back, accompanied by painful convulsive twitches, and a sense of great weakness in the lower extremities. She was also exceedingly unwell in health; her pulse was very

quick, her tongue white and furred, and her bowels were very costive. On examining the spine, I found considerable lateral curvature, and an elastic tumour of the size of an egg, on the left side about the ninth dorsal vertebræ, and it was this which had particularly attracted attention. One shoulder was evidently higher than the other, and a similar alteration had taken place in the hips. The thorax, too, was considerably altered in form; and the muscles of the spine had so wasted, that there was a deep furrow on each side of the spinous processes. This patient was treated on the principles I have laid down, and at the expiration of six months was so far recovered, the deformity being quite removed, that she was able to go into the country, where she soon got quite well. For the six months she was confined, she was kept continually lying down, and during the day lay on an inclined plane. Soon after the friction had been commenced, a violent rash broke out all over the back, which produced a copious discharge of a watery nature that continued for several days, during which the swelling on the side of the spine wholly disappeared, as well as most of the other symptoms of irritation. About a month afterwards, however, the swelling and nervous irritation returned, but by increasing the strength of the liniment with which the back was rubbed, they

soon subsided. At one time very troublesome hysterical affection came on, with violent convulsive action of the diaphragm, which produced most distressing pain in the back, therefore a physician was consulted, who prescribed some steel medicine with galbanum, but these were obliged to be left off, as they produced fever, and increased irritation. The medicines which she took during the greater part of the time were some rhubarb and calomel every other night, and some saline mixture, with tincture of hyoscyamus, during the day. She was, however, sometimes obliged to take additional opening medicine. This disease was considered by her friends to have been produced by a fall, which she received on her back a few months before she was taken ill. I may, however, add, that she had a great disposition to scrophulous disease, and was suffering from scrophulous ophthalmia; and that her mother, and one of her sisters, died of scrophulous disease.

It was remarkable to observe, as she improved in health, and the symptoms of irritation subsided, how the muscles of the spine increased in size, so that what was before a furrow, became now almost a ridge on each side of the spinous processes. I have seen this patient, subsequently, several times, and she continues perfectly well, and is quite free from any deformity.

The next case is important, as it proves how completely the greatest degree of deformity may be cured by the means I have recommended, and on account of the extraordinary affection of the parts connecting the scapula to the trunk. It is impossible to know for certain, but it appears probable, that there was some disposing cause in the scapula itself, as well as in the vertebræ, to produce this affection, and more particularly from the articulation of the clavicle and scapula having been similarly affected.

It is the case of a girl, of dark complexion, hair and eyes, who had been growing crooked for above three years. She had been under the care of a surgeon in Berkshire, who, her mother informed me, declared nothing could remove her complaint. I was consulted by her early in the spring of 1818, and she was then in her fourteenth year. On examination, I found very considerable lateral curvature of the spine, alteration in the form of the chest, and the right scapula projecting considerably from its natural situation, and so loosely attached, that you might almost draw it off the back, and indeed the parts connecting it were in such a flaccid state that you might readily place the greater part of your hand between the bone and the ribs. In this case there was no paralysis, but great weakness of the extremities, and

very distressing convulsive affection of the diaphragm.

This patient was kept continually lying in an horizontal position, and the tartar emetic ointment was directed to be rubbed along the spine every night. By means of this application irritation, and indeed a copious discharge, were kept up for several months, and at the expiration of this time she was so much better that her mother allowed her to get up, for a short time, every day; but unfortunately, by attempting to lift a coal-scuttle she hurt her back, and brought on all the bad symptoms she had so lately recovered from. She was, therefore, again obliged to be confined to the horizontal position, and counter-irritation was continually kept up; and these means were pursued till the end of the year 1819, when, being again much better, she was allowed to sit up. At this period, however, the necessary support was given to her back in the manner I have recommended; and, as the shoulder had not yet regained its natural situation, a figure of 8 bandage was applied, and the arm confined to the side. These measures were persevered in till the following spring, when I last saw her, and at that time there was no difference to be observed between the two shoulders, and the back was quite well. The connexion between the clavicle and scapula seemed, as I have previously stated, to

partake of the weakness of the other parts, so that the ligaments appeared relaxed and elongated, as we sometimes see in other joints, particularly in the knee. The medical treatment in this case was general, that is, applied to the state of her health at particular periods, and not of any specific nature.

I also attended another case very similar to the last. It occurred in a little girl, aged nine, who was an out-patient at St. Bartholomew's Hospital. There was in this case a great degree of lateral curvature, and precisely the same affection of the shoulder. She had also very great enlargement of the glands of her neck. This case also perfectly recovered, but it was much more tedious, as she was never kept in that state of perfect quietude which is essential to speedy recovery.

The following case is very important, as it shews the very severe symptoms which may accompany, or be produced by, lateral curvature. It occurred in a young woman of fair complexion, and light hair and eyes. She was first attacked when about seventeen years old. At this time there were no symptoms of nervous irritation, and all that was observed was, that the right shoulder grew out, and was considerably higher than the opposite one. She, however, gradually became weaker and more delicate till she was

nineteen years old, when she so completely lost the power, or rather the government of her legs, that she was unable to walk. She was also, as her mother informed me, extremely hysterical. She had been under the care of several medical men, some of whom treated her complaint as hysterical, and others as rheumatic, and the true nature of her disease had not been at all suspected, nor had it at the period I first saw her, although, with the other very marked symptoms of spinal disease, she had had for nearly a twelve-month incontinence of urine. When I was consulted about her, it was nearly four years after it was first observed that her shoulder grew out. I found her in the most horrible state of nervous irritation it is possible to conceive; her limbs were not paralytic, but they were so convulsively affected that she had no power over them, and if it was attempted to make her stand up she was immediately drawn forwards with great violence. Her pulse was very quick; and her bowels were obstinately costive, not being open above once or twice a week. Her appetite was tolerably good. She complained of great pain in her loins, and the incontinence of urine still continued. I was also informed that she had frequent fits, which were considered as hysterical. That all her symptoms were the effect of spinal irritation appeared clear to me, and I therefore examined

her spine, and found as complete an *S* as can be well imagined, and the greatest wasting of the muscles of the spine. I consequently ordered her to be immediately cupped on her back, and a large blister to be applied over the same part directly after, and to be kept open. I also directed her to lie constantly on her back, except while the blister was dressed, and at those times she was only turned on her side. To guard against her moving in the night, and to keep her legs quiet, her feet were confined to the bottom of the bed. The only medicines that were given her were aperients, to obviate the costive state of her bowels, and occasional doses of æther in some camphor mixture to relieve a continual sense of suffocation which she complained of. The good effect of this plan of treatment was almost immediate, as in less than a fortnight all the most violent and distressing symptoms had left her. Her bowels, too, were much more easily acted on; and she could sometimes retain her water for nearly the whole day. To relate the details of this case, through the year and a half she continued a plain treatment founded on the same principles, would be tedious and uninteresting, I shall therefore merely add, that at the expiration of that time she got up quite well, and with her back as straight as ever: notwithstanding, during the first twelvemonth after, she had occasional

attacks of spinal irritation, but they were always relieved by rubbing in a little of the tartar emetic ointment. It is worthy to be noticed, that this patient also had a scrophulous affection of the left breast; but subsequently she became quite well, and has been married for nearly a twelve-month.

There was also a young woman whom I attended in St. Bartholomew's Hospital, under the direction of Mr. Abernethy, who had very severe spasmodic affection of the muscles of the extremities and of the diaphragm, connected with lateral curvature of the spine, which all subsided under a very similar plan of treatment. She had been suffering a train of very severe nervous symptoms for at least nine or ten years, and none of her friends, nor the medical gentleman who sent her into the Hospital, had the least idea of her ever recovering. When first she came into the Hospital she could hardly stand at all, and her toes were generally spasmodically drawn directly downwards, as in a case of opisthotonos. She had also, very frequently, violent spasmodic affection of the diaphragm; her bowels were in a very costive state, and the evacuations very bad. Since she left the Hospital, which is now nearly four years, I have seen her several times, and once about a month ago, and she continues quite well, though she informed me that she has several

times had slight attacks of pain in her back; but they have always gone off upon her taking some opening medicine, and having her back well rubbed. This patient had previously been treated on the same absurd plan of giving large doses of those medicines called antispasmodics.

I will briefly relate the particulars of another case, as the deformity was very great, and yet the recovery very rapid.

A young woman, of dark complexion, hair and eyes, aged twenty-three, continued for several years growing more and more deformed from spinal curvature, by which the body was drawn so much to the right side, that she could hardly balance herself to walk at all, so that any thing but the line of gravitation was preserved here. She had no paralysis or other nervous affection of the limbs, but occasionally she had the most violent spasmodic affection of the diaphragm that I ever witnessed. She also had a bad cough, and complained of pain in her back. Ten ounces of blood were therefore taken from her back by cupping, and afterwards she was treated exactly in the same manner as the other patients whose cases I have adduced. The efficacy of this plan of treatment was very strongly demonstrated by this case, as in nine months she got up perfectly well, although the curvature had existed for nearly seven years. It is now nearly four years

since this patient recovered, and she has since continued free from all complaint.

Notwithstanding the preceding cases were attended by such urgent symptoms, there can be no doubt that the generality of cases of lateral curvature which we meet with in children, and particularly in girls before or soon after the age of puberty, are commonly in the first instance accompanied by no very particular symptoms, and subsequently with only symptoms of peculiar delicacy of health, and of general bodily weakness. I could adduce many such cases, which speedily recovered by adopting the plan of treatment I have advised, but it cannot be necessary, as I have already proved that the most severe cases of the same nature are curable by similar means, varied only in degree.

SCROPHULOUS DISEASE OF THE LUNGS.

A scrophulous state of the lungs being so commonly the pre-disposing cause of phthisis pulmonalis, which is so frequent and so fatal a disease in this country, the importance of this part of the subject will be readily admitted. As phthisis is, however, one of that class of diseases designated internal, and one therefore which does not so directly come under the cognizance of a surgeon, I shall not enter into the consideration of this part of the subject so fully as I should be otherwise inclined; but shall confine myself to a description of the peculiar state of the lungs in the different stages of the complaint, and to a brief relation of those symptoms which will enable us most accurately to distinguish each particular stage.

Cullen states, that he considers scrophulous tubercles to be one of the most frequent causes of phthisis, for two reasons; the one, "its so generally occurring when there is a scrophulous

diathesis; the other, its so frequently being produced by tubercles in the lungs, and because it is so often co-existent with a scrophulous affection of some other part of the body."—Vide par. 843, &c.

The first change which the lungs undergo, when they take on diseased action, in a scrophulous state of the constitution, is the deposition of particles of a cheesy scrophulous matter, such as has been already described, into their parenchymatous structure. I make use of the term *parenchymatous*, to distinguish from the bronchial structure, which I am convinced is seldom if ever the seat of this morbid deposition; for where this has taken place in both lungs to the greatest extent, the breathing is comparatively but little affected. This deposition goes on to form masses of different size and shape, and these masses are termed scrophulous tubercles.

The tubercles appear to be surrounded by cysts, but on close examination we find that these are nothing more than condensation of the surrounding substance of the lung. The tubercles will often go on enlarging to an indefinite extent, and as they enlarge, it frequently happens that two or more of them will coalesce, forming one large mass of scrophulous matter, made up of different portions, and each portion having apparently a distinct cyst, which preserves its vitality to the last, as its vessels are readily injected when we

throw an injection into a lung in this state. The tubercles, however, are clearly unorganized matter, as the injection never passes into them, and as they never shew any of the properties of living matter, particularly that uniform property of forming vascular connection to surrounding parts, whenever placed in circumstances favourable to it; but like dead matter, continuing insulated and unconnected with the surrounding parts, so that you may turn them out of the cavities in which they lie without injury, and leave the part of the lung surrounding them perfectly smooth, in the same manner as an acorn will turn out of its cup, or a nut out of its husk. It will be seen too, in the sequel, that, like dead matter, they act as foreign bodies. Of course, when the tubercle or mass of scrophulous matter is of an irregular form, and portions of it are projecting in different directions, it cannot be separated from its situation in the lung with the same facility as when its surface is smooth, or it is of a circular form. These tubercles are found pervading every part of the lung, or there may be only a few of them, and these of very large size; and sometimes many of them will project from its surface so as to make it rough and uneven.

Such are the most ordinary appearances which are displayed by the lungs in the first stage of scrophulous disease. There are, however, some

varieties found to exist with this state of the lungs. Thus it is not very uncommon to meet with small masses of calcareous matter, and of a substance very much resembling cartilage, in different parts of a lung, studded with scrophulous tubercles. We also, under the same circumstances, meet with portions of a whitish matter, in appearance much like the medullary substance of the brain, but of a much firmer texture, and so intimately connected with the substance of the lung, that it cannot be separated from it without laceration. This matter is in some respect similar to what we meet with in some species of carcinomatous disease.

I believe that the lungs will often remain for a considerable time in the state that has been described, without experiencing any other effect than what arises from the mechanical action, or pressure of the tubercles, on their bronchial structure; but at length an inflammatory disposition comes on, constituting what may be termed the second stage of this disease.

In this stage the substance of the lung, to an uncertain extent surrounding the tubercle, becomes gradually consolidated by a species of slow inflammation. Sometimes the lung will undergo this change all round the tubercle, but at other times only on one side. When this alteration has taken place, the bronchial or tubular structure of

the lung is obliterated, and its consistence is more like that of the liver than of the lungs. Sometimes, too, the lung gets into this state while the tubercles are of the smallest size ; but when this is the case, they are, generally, exceedingly numerous. From what I have witnessed on dissection, I am disposed to believe that even this change of structure may exist for a considerable time without any further alteration, and that it may take place in different parts of the lung, and to a very great extent, at the same time. Under these circumstances the tubercles themselves undergo no change, and after this period, I believe they are never enlarged; because at parts where suppuration has actually come on, and therefore where the disease may be supposed to have existed longest, the tubercles appear rather smaller than larger. At length, however, more active inflammation is set up in the altered part of the lung surrounding the tubercle, suppuration takes place, and the third stage of the disease is established.

At this period when suppuration has occurred, the tubercle will sometimes be broken down and mixed with the common matter, but at other times it will remain entire ; and it should be remembered that it is not the tubercle which suppurates, but the surrounding parts.

The extent of the suppuration will vary very much, but when it is connected with only one

tubercle it will be small, and form what is called a *vomica*. When, however, from the proximity or coalescence of several tubercles, the consolidated portion of the lung is great, it is common to have one large abscess form, but this does not preclude the contemporary formation of several smaller abscesses, or vomicæ. Dissection seems to prove also, that though vomicæ may be at first distinct, several of them may afterwards, by enlarging, coalesce and constitute one large abscess. Although this may be the state of the disease in one lung, the opposite one may be in the first stage of the disease, or it may even be perfectly free from all morbid affection; and the same observation is sometimes applicable to another lobe of the same lung. It generally, however, happens, that there is a succession of small abscesses, and that while the contents of one are evacuating, another abscess is forming, and that in the same lung there will be tubercles just formed, tubercles with the lung immediately around inflamed and consolidated, and tubercles forming part of the contents of vomicæ.

The description given by Dr. Baillie, in his Morbid Anatomy, is tolerably correct, as far as it goes, but on the whole very imperfect, as he entirely omits many of the most important points —at least those points, the knowledge of which should be the foundation of that plan on which the

disease is treated. He states, " the tubercles of the lungs in many cases are very numerous, and in others comparatively few; in some cases they are quite separate and distinct, and in others many of them are joined together. In some almost all the tubercles have run more or less into a state of suppuration, and in others this process has not at all begun. When the disease has made any considerable progress, there is commonly, in this respect, a mixed appearance, some of the tubercles being in a state of suppuration, and others not having advanced as far as this state." The statement with respect to the suppuration of the tubercles is entirely a mistake, as I have observed before.

The contents of the vomicæ generally find their way into the bronchia, and are discharged by coughing; but sometimes there is no exit, as the suppuration having been imperfect, the surrounding substance of the lung is thickened and consolidated. When a larger abscess forms it may be discharged in the same way; but it occasionally happens, that when it is situated in the upper part of the lungs it will burst into one of the larger bronchial ramifications, fill the trachea with matter, and produce suffocation, and almost instant death.

I was called in to see the cook of Dolly's beefsteak house, who died from this cause. On ex-

amination, the lungs were found full of tubercles and vomicæ, and in the thick part of the right lung there was a large abscess, which had burst into one of the large bronchial tubes, and filled the trachea as has been described. This man had for a long time been expectorating large quantities of matter, but for a week before he died he had scarcely spit any, so that, during the formation of the large abscess, it appears that the other abscesses or vomicæ ceased to secrete any matter, which may also account for adhesions that had formed between the opposing sides of some of the empty vomicæ. It sometimes happens too, that these abscesses make their way to the surface of the lung, and burst into the cavity of the chest; or, the lung forming adhesions to the other parts, they may burst into either of the mediastina, or into the pericardium, or even into the abdomen, as in a ase that has been related in another part of this paper; or externally, as a common abscess on the surface of the body. There are so many cases of this description, described by different authors, that it would be useless for me to state any more facts illustrative of the same point.

SYMPTOMS OF THE DISEASE.

In the first stage of this affection of the lungs, when the tubercles are few, it will be impossible to ascertain with any degree of certainty that they exist. When, however, they are numerous, they generally occasion what is called shortness of breath, and a frequent disposition to sigh, as if to overcome the oppression produced by the weight and pressure of the tubercles on the more minute bronchial ramifications. Although there is that delicate state of health which generally attends all scrophulous diseases, there is not commonly any symptom particularly indicating this affection of the lungs. At the commencement of the second or inflammatory stage, or when the consolidating process is going on, the attention is first attracted to the complaint by an occasional, short, hacking cough, attended by a sense of uneasinesss, or pain in some part of the chest; there is also an inability to completely expand the thorax, or the breath cannot be drawn in as deep as usual, and every attempt is accompanied with a kind of catch. At first the pain is only felt during voluntary inspirations, but subsequently it becomes constant, and is fixed to particular spots. As the disease advances, not only the pain increases, but the health also materially suffers;

indeed, during the whole of this stage, the pulse is generally quicker than natural, and there is often a species of remittent fever. The patients also complain of frequent pain in the lower part of the back, and of listlessness and weakness, and are very restless at night; the cough too is generally much increased, and is always produced by every forcible inspiration, and at such times the pain is very acute. The cough at this period is most frequently dry, but sometimes there is an expectoration of a glary mucous. This state often exists for a very long time before suppuration commences, and sometimes at first the formation of matter is so small that there are no decided symptoms produced, and altogether there is so much obscurity that it cannot be readily ascertained.

The appearance of the expectoration at this stage is a very deceptive sign, as it is always mixed with the secretion of the mucous membrane of the bronchial tubes, which itself sometimes amounts to complete purulent matter, while the discharge from the vomicæ is generally principally composed of matter very different from true pus, so that what is expectorated always derives much of its character from the secretion of the mucous membrane of the bronchia, and indeed I believe the greater part of what is continually expectorated is often from this source.

Nevertheless, the irritation excited by the discharge from the vomicæ in these cases may possibly be the first, or at least an additional cause of that morbid condition of the mucous membrane which occasions the purulent secretion, though it is probable that the inflammatory condition of the mucous membrane is often gradually propagated from the original seat of the disease. That such a state of the mucous membrane may exist is proved by dissection, as we often meet with cases which were attended by a copious expectoration during life, and yet on examination after death there is found no abscess or collection of matter, or perhaps only one or two small vomicæ, but such a large secretion of pus from the membrane of the bronchia, that large quantities of it may be squeezed out of every part of the lung. Every surgeon, who cultivates morbid anatomy, must be familiar with such cases. The expectoration which accompanies them during life is often even greater than in cases in which abscesses successively form, till the lungs are extensively destroyed. It is probable also, that such a state of the mucous membrane may sometimes materially assist in producing that great general irritation which always accompanies these cases. That the cause is equal to the effect must be admitted, as we so often witness such great constitutional disturbance occasioned by inflamma-

tion of the mucous membrane of the eye, and of the urethra. That, however, in common cases of consumption from tubercles, there is abundant cause of constitutional irritation in the successive formation of abscesses cannot be denied, and particularly when we consider that, while suppuration is complete in one part, the inflammatory stage may be at its height in another, and in others it may be only commencing. These circumstances also account for the mixed nature of the attendant symptoms—for the co-existence of symptoms of great general irritation and debility, and of local pain and other marks of active disease.

The cough and difficulty of breathing which accompany the advanced stage of this complaint are most distressing; but the difficulty of breathing is often more so than the cough. It sometimes happens that large abscesses form suddenly, almost without any previous indication, and yet, on dissection after death, the lungs are found extensively tuberculated, producing the greatest difficulty in respiration, and the highest degree of constitutional irritation. I had the opportunities of witnessing two such cases, both of which were mistaken for sudden attacks of pneumonia, and the patients were literally bled to death. One died on the seventh, and the other on the tenth day after the attack. In both there was a copious

expectoration of matter before death; and on dissection, the lungs of both were found tuberculated. In one case, a great part of one of the lobes of the right lung was consolidated, and in its substance two large abscesses had formed. In the other, the same thing had taken place, but there was only one abscess. From the appearances on dissection, and from the excessive oppression and difficulty of breathing which so suddenly came on, and from the little relief that was afforded by the bleedings, as well as from the great relief that was experienced directly expectoration commenced, there can be no doubt about the true nature of these cases, and that the urgent symptoms were not produced by acute inflammation, but by the confinement of the contents of the abscesses which had gradually formed, and particularly as in the one case in which a second abscess formed after excessive bleeding, the most severe symptoms were re-produced, and continued for several hours, until a large quantity of matter was expectorated.

Although, at an early period of the suppurative stage, the appearance of the matter will seldom enable us to judge accurately of the nature of the disease, still, at a more advanced period, it is an unerring index. It is impossible accurately to describe it, but I may observe, that it seems as if composed of mucous, pus, and a curdy matter,

of a whitish, green, or yellow colour. Sometimes it is streaked with blood, but it seldom happens that this is constantly the case. The last stage of a consumption is so clearly evinced by the great shortness of breath, the progressively increasing debility, the alternate chills and heats, the profuse perspirations, the excessive quickness of pulse, and the swelling of the ankles, accompanied by cough and copious expectoration, that it can never be mistaken. To enter, therefore, more at large into the consideration of this part of the subject, would be foreign to the object of this Treatise.

For the reasons assigned at the commencement of this section, I shall not discuss the treatment of this disease of the lungs. Nevertheless, before I conclude, I will just observe that, from the nature of the disease, it would appear that the only remedy from which there is any chance of deriving much benefit, is counter-irritation, and that this should be made without producing additional disturbance to the general health. Perpetual blisters, therefore, can seldom be a proper mode of making counter-irritation, as they always occasion so much pain; and the best mode of making it appears to me to be by issues, but they should be much larger than they are commonly made, and this they may be without exciting any constitutional disorder. It would, however, be ab-

surd in the last stage of a consumption to attempt to remove the disease; but I am very much mistaken if, at less advanced stages, I have not seen issues, conjoined with proper constitutional treatment, completely remove all disposition to the disease; at least I am certain that, from the use of such means, I have seen patients get fat and strong, who have previously been progressively becoming more and more emaciated, having at the same time pain in the chest, great difficulty of breathing, cough, expectoration of purulent-looking matter, and continual quickness of pulse.

With reference to the treatment of scrophulous disease of the lungs, it is a question of the utmost importance, whether these tubercles are ever completely resolved or absorbed, as it is evident that if this healthful process cannot take place, there can never be the slightest possibility of removing the disposition to the disease when once they have formed. It is a very common opinion, that they never do disappear unless suppuration takes place, but what are the grounds of this opinion I am really at a loss to discover. Reasoning from analogy, I certainly should be induced to believe that they may be absorbed; for that in the glands and in the bones such a restorative process sometimes takes place, it can hardly be denied by even the most sceptical. I am aware, however, that there are some surgeons who maintain that when once

a person is scrophulous, he must always continue so; that the scrophulous diathesis can never be removed, without which it is evident that no restorative process can go on. To attempt to convince such persons that scrophulous tubercles may be absorbed would, of course, even if backed by the most incontrovertible arguments, be useless and futile, so that I shall not at present pursue this subject further, but conclude with the following quotation from Cullen's First Lines of the Practice of Physic:—"I am disposed to think that Nature sometimes resolves and discusses tubercles which have been formed."

ON SCROPHULOUS DISEASE OF THE HEART.

FORTUNATELY this important organ is but seldom affected by scrophula; but, like most other parts of the body, it is sometimes the seat of the disease. Wiseman states, that the heart is certainly obnoxious to it. He relates one case in which a scrophulous swelling, weighing two ounces, was attached to the apex of the heart. The only instance which I have met with of this disease of the heart occurred in a rabbit, which died of phthisis. In this case there were three masses of scrophulous matter, nearly as large as a pea, in the substance of the left ventricle, and indeed one of them was projecting into its cavity. They exactly resembled tubercles in the lungs. The lungs were studded with tubercles, and several vomicæ had formed; and the kidneys were in a similar state. In this animal there were also two large hydatids; the least of which was the size of a hen's egg; in the interior and on the exterior of

which there were numerous smaller ones. One of them was situated between the scapula and the trunk, and the other among the flexor muscles of the thigh. These parts are preserved in the Museum of Mr. Langstaff. The rabbit belonged to a patient of mine, and the swelling and lameness occasioned by the hydatids were what first attracted his attention to it. After this I several times saw it, and the action of the heart was so violent that it always attracted particular notice, and communicated such distinct pulsations to the hydatid underneath the scapula, that I at one time suspected it was an aneurismal tumour. At the time of its death, the animal was emaciated to a very great degree. It also had several fits before it died. Although this is the only case I have ever met with of scrophulous disease of the heart, I am informed that there are some specimens preserved in different Museums proving the fact; it must, however, be allowed that it is a rare occurrence.

ON SCROPHULOUS DISEASE OF THE ABDOMINAL VISCERA.

DISEASE OF THE LIVER.

It is not a very common occurrence, but we sometimes meet with scrophulous tubercles in the liver; and the tubercles are in the same manner as in the lungs, distinct from the substance of the gland. Dr. Baillie states, "that scrophulous tubercles of the liver, more represent in their texture a scrophulous absorbent gland, and are spread through the whole substance of the liver; but produce little irregularity of its surface. They sometimes are converted into a scrophulous pus, but by no means so frequently as the tubercles of the lungs."

In addition to the preceding description, I may observe that the form, size, and number of the tubercles are exceedingly various. Sometimes they are extremely numerous, and of the most minute size, and distributed through the entire substance of the liver; at other times they are also numerous, but of larger size and of a regular

form; and occasionally they are few in number, and are apparently composed of large masses of scrophulous matter, of various and irregular shapes, but still being enclosed as it were in a cyst. I may observe too, that the true scrophulous tubercles in the liver generally appear more closely connected with the substance of the gland immediately surrounding them than the same species of tubercles do in the lungs.

Although, in general, when the liver is scrophulously affected its surface is smooth, still it is sometimes uneven from the projection of the tubercles. In one patient, who died of scrophulous disease of the hip, and who had the same affection of other parts, there was very great irregularity of the surface of the liver from this cause, and in another case I witnessed it in a slighter degree, and also in connection with other scrophulous disease, so that there could not be any doubt about the nature of the tubercles. Suppuration does not so frequently follow from tubercles in the liver as in other parts; but I have twice seen abscesses in the liver containing the same kind of matter as we meet with in scrophulous abscesses, though there was no appearance of tubercles remaining—so that in these cases the true cause of the suppuration could not be positively ascertained. Nevertheless, that tubercles in the liver may occasion suppuration I

must believe, because I see it publicly stated by such a man as Dr. Baillie—a man whose abilities and experience in his profession can hardly be surpassed, and whose veracity I conceive cannot be impugned. Besides, it appears arrogant in the extreme for any men to doubt it, after it has been affirmed by another, merely because in their practice, which, extensive as it may be, must still be limited, they have never met with such a case. Moreover, let me ask, what there is in the liver which should render it unsusceptible to scrophulous action, when all the other parts of the body most resembling it in structure are liable to it? and that if the tubercles exist, why they should not induce suppuration, when, as is indisputable, abscesses may form from other causes? That, however, the tubercles should not excite suppuration in the surrounding parts in the liver, by any means as readily as in the lungs, one would à priori suspect, from the great difference in their structure, and in their functions.

OF THE PANCREAS.

I have never seen in this gland any matter similar to scrophulous tubercles; but I met with an instance of an abscess in it, containing nearly two ounces of matter very similar to what scro-

phulous abscesses usually contain. The patient died of ascites. There is a case mentioned by Wiseman, in his Treatises, page 251, of a strumous abscess in the pancreas, which contained a pint of matter. The pancreas being so little liable to take on diseased actions is sufficient to account for its being so rarely attacked by scrophula.

OF SCROPHULOUS DISEASE OF THE SPLEEN.

Scrophulous tubercles form in this viscus in the same manner as in the lungs, but they generally acquire a larger size, and perhaps this is owing, as in the liver, to their not being so liable to induce suppuration. Sometimes, however, they are very numerous, and of the smallest size, and diffused through the whole gland. There are preparations proving that they may produce suppuration.

On this subject Dr. Baillie states, in his Morbid Anatomy, "that scrophulous tubercles are much more rarely formed in the spleen than in the lungs, but they are of precisely the same nature in both. The scrophulous tubercles of the spleen are less disposed to suppurate than those of the lungs."

ON THE INTESTINES.

The intestines are sometimes studded with scrophulous tubercles. I have met with two cases in which they were extremely numerous. In one case the patient's death was immediately produced by phthisis from the same cause. In this case they were very numerous, and dispersed in patches in the omentum, between the layers of the peritoneum. In the other case the patient died with diseased hip: he had also most extensive mesenteric disease, many of the glands forming abscesses. The scrophulous masses were not only on the surface of the intestines, but also there were many of them behind the peritoneum covering the liver and spleen; they were very small, and of a yellow colour, and exactly resembled pieces of the cheesy matter which was found in some of the mesenteric glands, and of the same colour. Dr. Baillie gives a plate of a portion of the jejunum, with a great number of scrophulous masses covering its external surface. He states that they adhere immediately behind the peritoneum, and resemble in their texture a scrophulous absorbent gland, which is just beginning to suppurate. These masses are generally found to adhere not only to the part which covers the intestines,

but to every other part of it, especially the omentum."

ON DISEASE OF THE KIDNEYS.

These glands may be said to be very subject to take on scrophulous action. I have repeatedly seen scrophulous masses of a considerable size in the kidneys, and consequent suppuration, several abscesses of the size of a small walnut having formed in different parts. I have already stated, that I met with a case of this kind in a rabbit. Mr. Langstaff shewed me the kidneys of a monkey, in which several large scrophulous tubercles had formed. When one kidney has been in a state of suppuration I have seen the other studded with a vast number of very small masses of scrophulous matter. It sometimes happens, that from the extent of the suppuration the whole of the substance of the kidney becomes destroyed, so that there is nothing but a complete bag remaining.

Dr. Baillie, in his Morbid Anatomy, states, that "the kidneys are liable to tubercles, which sometimes suppurate so extensively, that the substance of the gland becomes almost entirely destroyed, and converted into a number of cells, which communicate with each other, and contain a quantity

of soft curdy matter." Vide Series of Engravings, page 128. He also states, that the renal capsules are subject to scrophulous enlargement.

I have seen several of the infundibula filled with scrophulous matter, and consequently much dilated.

ON SCROPHULOUS DISEASE OF THE BRAIN.

The brain is not very unfrequently the seat of scrophulous tubercles and abscesses. It seems, too, that they may exist for a considerable time without producing any symptoms which can indicate their presence; and that it is not till they begin to excite irritation in the substance of the brain surrounding them, that they at all interrupt the functions of the nervous system. I once found in the brain of a young man, aged nineteen, who died suddenly, without having previously had any symptoms particularly indicating head affection, several small scrophulous tubercles, and in the left lobe of the cerebellum an abscess of the size of a pigeon's egg. I have examined, or been present at the examination of, several cases in which there were found scrophulous tubercles in the brain, from the size of a pea to that of a walnut.

The tubercles of the brain, like those of other parts, are unorganized, and distinct from its substance; and having exposed one of them, you

may readily lift it out of its bed without rupturing any vessels, or lascerating any of the parts contiguous to it. I believe it oftener happens that you find several of them in a brain than only one; and that, as in other parts, you find that though one of them has occasioned an abscess, the others shall not apparently have excited any irritation. Sometimes, too, there are in the same brain in which there are true, or the common scrophulous tubercles, tumours of a different description. I have seen these tumours of different sizes, and they appear to be more intimately connected with the substance of the brain, and almost of the same colour, but much firmer in texture; while the common scrophulous tubercles exactly resemble those of other parts. There are preparations proving the existence of both these species of tumours at the same time. I believe, however, it is a fact not mentioned by any author. I may observe that they are very different from tumours of the fungoid class, and very similar to what we sometimes meet with in scrophulous disease of the lungs. It is not very uncommon to find scrophulous tubercles of the size of a large pea, or even of a marble, in one or both of the choroid plexuses. In dissecting a body at St. Bartholomew's Hospital, I met with a case of this kind. The parts are preserved in Mr. Abernethy's Mu-

seum. Dr. Baillie mentions this fact. In the case I have alluded to, the patient, who was a boy about sixteen years old, died of ascites and scrophulous affection of the glands of the mesentery.

I have remarked that the symptoms produced by tubercles in the brain are very equivocal and irregular. In one patient who died of this affection, there was paralysis of the lower extremities, without any other decided symptoms, though, on examination after death, there was also found a turgid state of the vessels of the pia mater, and a considerable quantity of water in the ventricles. A child, two years and a half old, who died of this disease had frequent epileptic fits, but at other times was in good spirits and free from any perceptible nervous symptoms.

I have already stated my belief, that the occurrence of the disease in the important parts, which have been the subject of discussion in the pages immediately preceding, often renders all our endeavours to remove the same morbid affections in other and less important parts futile and unavailing, and therefore, in giving our prognosis, we should particularly attend to these circumstances; and we should be always apprehensive that some of these parts have become affected when the constitutional disorder continues longer than there is any evident cause to keep it up.

ON SCROPHULOUS OPHTHALMIA.

THERE is a species of ophthalmia which is often connected with that state of constitution which I have described as scrophulous, and which frequently exists in conjunction with other scrophulous diseases, and is therefore termed scrophulous ophthalmia.

In this species of ophthalmy, at an early stage, the edges of the eyelids appear red and thickened, and there is that appearance of the whole eye which is generally attributed to weakness, and if we turn down the under eyelid its lining seems slightly thickened and inflamed: the pain which accompanies this stage is very trifling. This state will frequently exist for a considerable time, often till the eye becomes excited by some accidental irritation; but it also happens, that without any evident cause the chronic inflammation spreads to that part of the conjunctiva covering the eyeball; vessels carrying red blood shoot over the cornea, which at first produce only a general dulness, but subsequently white opaque spots, or complete opacity of some part. Moreover, it is common, after the disease of the

eyelids has continued for some time, for small pustules to form on the margins of the eyelids, or on different parts of the cornea, occasioning surrounding inflammation, and consequent ulceration and opacity. In all the stages of this disease there is always a disposition in the eyelids to stick together during the night, which in children is generally a cause of great additional irritation. The thickening of the eyelids is often so considerable as to be a complete source of deformity; and when the affection of the eyeball is extensive the light is very troublesome, and consequently the eyelids are kept but half open, which very much adds to the general appearance of weakness. Indeed, sometimes the intolerance of light is so great, that the eyelids cannot be unclosed for a moment without producing the most distressing pain; and this state may continue for months, and even for years, when the health is very bad, or the case is treated improperly, with only occasional remissions. These are the only varieties of this form of ophthalmy, which are often connected with other scrophulous diseases, and therefore are the only diseases of the eye which can fairly be attributed to a scrophulous state of health. Nevertheless, there are some other affections which have been ascribed to the same cause, but as I cannot directly trace their connexion I shall not treat of them here.

TREATMENT.

As this disease depends upon the same disorder of the general health as all other scrophulous diseases, it follows that the constitutional treatment should be very much the same; and I believe that when proper attention is paid to this point at an early stage there will be no fear of ulceration, or of any other effect that can at all impair the sight. Bark and other tonics have been especially recommended in this species of ophthalmy, but though I have witnessed their exhibition in numerous cases, I never observed that they exerted the least power over this particular disease.

The local treatment is very simple. In the mild forms of the complaint, or when the eyelids are merely affected with a slight degree of this species of inflammation, it principally consists in bathing the eyes frequently with a weak solution of sulphate of zinc, or with any other mild astringent lotion; and in applying to the tarsi every night a little simple ointment, to prevent their sticking together. When, however, the eyelids are sore, from the existence of small pustules or ulcers on their margins, it is better to bathe them frequently with some decoction of poppies, a little warm, and afterwards to anoint them with the

diluted citron ointment. When the pustules are situated on the cornea or sclerotica, and a considerable degree of inflammation attends them, the application of two or three leeches to the temple or under eyelid will often be attended with its almost immediate removal. When, however, the inflammation still continues, it is sometimes highly serviceable to apply a blister to the temple, to the nape of the neck, or behind the ear. If an ulcer forms on the cornea, the touching it occasionally with some mild caustic, or the dropping a solution of opium into the eye, will frequently very much diminish the pain, and be attended with other advantage. However, to radically cure the disease we must, as I have stated before, remove the unhealthy condition of the body on which it so mainly depends.

When specks or opacities have been produced there is no use in endeavouring to dissipate them so long as the original disease remains; and the application of stimuli, while the scrophulous action is actively going on, will increase instead of diminish them; but when it has entirely ceased, by the judicious use of such medicines, we may generally succeed in readily curing them. I may, notwithstanding, observe, that the appearance of weakness and redness, which so often exists in the eyes of persons of a scrophulous habit for a great length of time, even for years, and which is

produced by chronic inflammation, or slight thickening of the conjunctiva lining the eyelids, is generally readily cured by the proper employment of astringents and stimuli. Yet for this purpose it is not sufficient to wash them with a stimulating lotion, but we must evert the eyelids, and make the application directly to the diseased conjunctiva. If we adopt any other mode of using stimuli, they must necessarily come in contact with parts that do not require them, and thus they often do more mischief than good, and excite inflammation when we wish to allay it. The same observations are applicable to cases of opacity of the cornea, which in general are dependent on a diseased state of the conjunctiva, except where specks are produced by pustules or the healing of ulcers, as they are to be cured by applications to the diseased conjunctiva palpebrarum, and not to the opacity itself.

In the use of stimuli some discrimination is necessary, and not only with respect to the state of the disease, to which I have before alluded, but also in the selection of the medicine we shall determine to employ. Now it is often the case, that when the application of a weak stimulus will irritate and aggravate the complaint, the application of one ten times the strength will allay irritation, and cure the disease. This may at first appear paradoxical, but it is certainly true. I

have many times met with cases in which the application of the solution of argenti nitras, in the proportion of one or two grains, to an ounce of distilled water, has produced the greatest irritation, when the application of the solution in the proportion of twenty grains to the same quantity of water has quickly relieved every symptom of disease.

The cases of this disease which most frequently come under our observation are so little formidable, that to relate the details of any would be unnecessarily occupying time; indeed it would be to recapitulate the description I have given of the disease, which is entirely drawn from cases fresh in my recollection. I shall therefore only adduce the two following cases, as illustrative of the most aggravated form of the disease:—

A little girl, aged eleven, of dark complexion, hair and eyes, was placed under my care on account of a disease in her eyes, which she had had since she was two years and a half old. She had been under the care of different oculists, and for nearly a twelvemonth a patient in one of the most celebrated ophthalmic institutions. At the time I was consulted, she was considered perfectly blind, and was always obliged to be led about. I observed that she kept her eyes closely shut, and her mother informed me that this was continually the case, as the least light occasioned the

most severe pain, and a most profuse flow of tears. The eyelids appeared swelled, and also the glands of her neck were enlarged. Her pulse was small and quick, her tongue was white, and her bowels were costive; but her appetite was good. On opening the right eye the conjunctiva palpebrarum appeared thickened, and of a dark red colour, and there were vessels shooting over different parts of the cornea, and all meeting as it were in the centre, by which the pupil was greatly obscured, but there was not what is generally understood by an opaque cornea. There was a similar appearance of the conjunctiva in the left eye, but in this there was complete opacity of the cornea, over which there were also red vessels passing though they were not so numerous or so large as in the opposite eye. There was a copious watery discharge, but nothing like purulent matter. There were numerous small pustules on the edges of the eyelids; and every attempt to open the eyes caused very severe pain. The following is a brief description of the treatment in this case. For the first fortnight one or two leeches were applied daily, or every other day, to the under eyelid; the eyes were constantly bathed with decoction of poppies, and two or three times a-day the edges of the eyelids were anointed with a little diluted citron ointment. Saline purgatives, with small doses of hyoscyamus, were given at regular

intervals, and a grain of calomel every other night. At this time the inflammation and pain having much subsided, the use of the leeches and the decoction of poppies was discontinued, and more stimulating applications were employed. At first a weak solution of zinci sulphas was only made use of, the same ointment being continued; but subsequently, a strong solution of the argenti nitras was applied to the inner surface of the eyelids every other day. By pursuing these means for two months, the disease was so far recovered from, that the child was able to go to school, which had never been the case before since her first attack, and in another month's time, the only remains of the disease was a very small speck on the left eye, and since then this has also disappeared. It is now nearly two years since this child was cured, and she has continued perfectly well. About two months ago the brother of this patient, only two years old, was brought to me with a similar affection of his eyes, but by pursuing the same treatment he is now nearly well.

The next is the case of a middle-aged woman, who was brought to me for advice about six months ago. She had been so blind for the last twelvemonth, that she could not walk about the room without being led, and she declared that she could not distinguish any difference when a dark object was held up between her eyes and

the light. On examining the eyes, I found them both much in the same state. The cornea of both eyes was exceedingly opaque, being nearly white, and over its surface numerous red vessels were passing, which united in the centre, so as to form a complete point or elevation. The conjunctiva palpebrarum appeared much thickened, but perfectly smooth, and was of a dark red colour; and there was a great discharge of water from the eyes. Her general health was very bad. She had been under the care of a celebrated oculist at the west end of the town for several months, but without deriving any benefit. Nevertheless, by adopting the plan of treatment described in the last case, she has so far recovered that she is able to perform her ordinary occupations, and she walks every other day from her house, in Gray's-inn-lane, to my house, without any one to direct her; indeed she is very nearly quite well; and the opacity in the cornea has appeared to subside exactly in the same ratio as the disease of the conjunctiva.

There was also a case in Christ's Hospital, which shewed the efficacy of this plan of treatment in a very striking degree. It occurred in a little boy, who was brought from Hertford to London to have the advice of Mr. Abernethy, as the disease in his eyes was of that intractable nature, that he had completely lost the sight of

one of them, the whole cornea resembling a piece of mother of pearl, and it was feared the sight of the other would go in the same way. I saw this child with Mr. Abernethy, and it was at once determined to adopt the plan of treatment described in the preceding pages. From this time the disease began to subside; and the recovery was so rapid, that in a very few weeks the patient was quite cured, and he could see with both eyes as well as ever he could.

I first made use of such a strong solution of the argenti nitras in diseases of the eyes about five years ago, among the boys of Christ's Hospital, with the sanction of Mr. Abernethy, under whose direction I attended them. There was at that Institution, for several years, a most contagious form of ophthalmia, which, when left to itself, or when treated improperly, produced the most disorganizing and destructive effects. The following is a brief description of it:—

ON THE NATURE AND TREATMENT OF THE OPHTHALMIA, SO LONG PREVALENT IN CHRIST'S HOSPITAL.

This disease was clearly of a purulent form; but it generally commenced very gradually, and in both eyes at the same time. At first a slight degree of inflammation attacked the conjunctiva

palpebrarum, particularly at the external canthus, attended by a sense of weakness in the eye, and a slight uneasiness when in a strong light. This state would often exist for several months, though perhaps gradually, but almost imperceptibly, increasing, till, from some accidental cause, as a cold, a blow, or some foreign substance getting into the eye, a sudden and great increase of inflammation would take place, during which the tunica conjunctiva would become so much thickened, or granulated, as to form distinct folds at that part where it begins to pass from the eye to the eyelids. In some cases, however, the disease was milder, and the inner surface of the eyelids put on more the appearance of very fine scarlet velvet than any thing else to which I can compare it. In others again, the form of the disease was much worse than what I have described. The conjunctiva would be so much thickened, or the growth of new substance would be so great, that the eyelids would become everted, and the eye-ball almost wholly obscured. This stage of the disease was sometimes attended by much pain, though often there was but little: the same remark may be made with respect to the tolerance of light, and also with reference to the state of the health; as except in the very bad cases, there was very little acceleration of pulse, nor any particular whiteness of the tongue. There was, however, almost always

an uneasy sensation, as if sand or something rough were in the eye.

The duration of this stage was very uncertain, but it often existed only for a very few days, and seldom continued for more than a fortnight, except in a few severe cases in which there was a very bad state of health, when it would continue for many weeks, and no local treatment have any effect in removing it.

In this stage the conjunctiva oculi was always affected, but generally very slightly, except in the worst cases, when it was often very severely; and I have even known it affected in the same manner as the conjunctiva palpebrarum; and sometimes there has been an appearance of odema at this part. This stage was often, at first, accompanied by a copious discharge of puriform matter, but it very soon subsided into a mucus discharge, though the frequent concretion of a yellow matter on the eye-lashes proved that there was always more or less of a puriform matter secreted.

With the cessation of the acute inflammation, the third stage might be considered to commence. This was distinguished by a sense of weakness in the eyes, slight dimness of sight, but especially by the immensely-thickened state of the conjunctiva, and the discharge of a muco-puriform matter, which often lay in masses on the surface of the granulations, or between the folds of the diseased conjunctiva. There was also an appearance

as if the eyes were smaller than natural, or as if the eyelids could not be completely opened, and also as if they were not completely in contact with the eye-ball. I should observe too, that as long as there were the slightest remains of this stage of the disease, or of excrescence from the lining of the eyelids, a cold, or any other cause of irritation, was sufficient to re-produce the second and only dangerous stage of the complaint, as was sufficiently proved by a trick the boys had at one time of re-producing the active stage, by putting a little sand or dirt into their eyes, whenever they wished to stay out of school.

ON THE TREATMENT.

In the treatment of this disease there is nothing to be done during the first stage, or when there is only an appearance of slight inflammation of the conjunctiva palpebrarum, with what is usually termed weakness of the eyes, but to wash the eyes occasionally with some soothing or very mild astringent lotion, to anoint the edges of the eyelids with some mild ointment at bed-time, to keep the bowels regular, and to avoid all sources of irritation. I cannot, however, assert that I have ever seen this treatment, or any other, effectual in arresting the progress of the disease at this stage; indeed, I verily believe, that when once the eye is attacked, the disease will go through the

three stages I have described, whatever treatment be adopted, and however liberally emetics, bleeding and blisters, be made use of. A great deal, nevertheless, may undoubtedly be done to delay the accession, and to moderate the violence of the other stages, so as to render the disease comparatively trifling. In the second stage the treatment consists in bleeding, according to circumstances; the application of blisters, which should be kept open; bathing the eyes frequently with tepid soothing fomentations; the anointing with some mild ointment the margins of the eyelids; and in the exhibition of purgative medicines. By the judicious use of these means, this stage may be very much shortened, and the formation of granulations on the conjunctiva very much restrained. When, however, the growth of new parts has been so excessive that the eyelids have become everted, I have found the application of the argenti nitras, or even of the kali purum, most efficacious. The application does not give much pain, which, perhaps, may be accounted for by its being made entirely to new parts; and I have generally seen it followed by such immediate wasting of the granulations, that the eyelids have recovered their natural position in less than twenty-four hours. I have observed too, that it has happened, that, when the granulations have been repressed in this manner, the disease has ulti-

mately got well much sooner than in those cases which at first were not half so formidable. Of course the greatest care should be taken that the caustic does not come in contact with the cornea. I prefer this mode of practice very much to excision, as when that operation is performed in this stage of the disease, it almost always happens that new granulations are speedily formed; and indeed excision, whether by the knife or the scissors, can seldom with any propriety be had recourse to at this period, but only in the third stage, or when the disposition to form new granulations has entirely ceased. Moreover, I doubt even in that stage, except where there is eversion of the eyelids, whether excision can often be advantageously employed, and I am certain that I have seen it re-produce the inflammatory state, so that the granulations or excrescences have very speedily become as large as ever. Scarifications too, I have found in the same manner increase the inflammation, and do more harm than good in the acute stage; and in the third stage I should never employ them, without applying, at the same time, the strong solution of the argenti nitras, or some other powerful styptic. It sometimes happens that, in the second stage of the disease, when there is a high degree of inflammation, or when the pressure from the new growth is very great, a portion of the cornea

will be wholly destroyed by ulceration, or the internal membranes will become affected, suppuration take place, the cornea or sclerotica give way, and the matter be discharged at one or more openings. Under these circumstances complete disorganization of the eye, and total blindness, may be the consequence; but it sometimes happens that it terminates by only producing prolapsus iris, a contracted pupil, and opacity of some part of the cornea, when a very considerable degree of vision will remain, except in those cases in which, during the inflammatory stage, the crystalline lens has become opaque. These circumstances occurring, of course, do not in any material degree call for any particular variation in the treatment, so long as the inflammation exists; but during the healing of the ulcer or aperture in the cornea it is adviseable to apply the belladonna to the eye-brow, to keep the pupil dilated as much as possible. If, however, the action of the iris, which the belladonna promotes, should irritate the ulcer, and excite a disposition in it to spread, as I have witnessed, of course it must be discontinued.

The use of stimuli in this stage is, I believe, always hurtful; but the inflammation having ceased, the parts being in a quiet and indolent state, and the disease having arrived at what I term the third stage, they may be used with the greatest advantage. Indeed the principal part of

the treatment now consists in the removal of the granulations, or newly formed surface of the conjunctiva, and this may be effected in three ways—first, by what may be called the natural mode, the action of the absorbents, which may be much increased by the judicious application of stimuli; and, as I have stated before, secondly, by the application of caustic; and thirdly, by excision with the knife or the scissors. Of these three modes I have certainly found the first most efficacious, except in those cases where the formation of new matter has been so excessive as to produce mechanical injury; and of all the stimuli I prefer the saturated solution of the argenti nitras, as being most expeditious in its effects, and I believe least painful of any that can be used with advantage. We may, however, commence with it a little weaker, as we then are enabled to gradually increase its power as the parts become accustomed to the stimulus. It is better generally to make the application every day, but every other day is sometimes as often as it can be done with propriety.

When it is adviseable, for the reasons I have adverted to, to remove the granulations at once, I prefer, as I have stated before, the caustic to excision; but when it is to be performed by the latter means, I do not believe that it is of any material consequence whether the scissors or the knife be employed.

During the whole of this stage, it is necessary to wash the eyes very frequently to preserve the eye-lashes free from matter. It is also useful to anoint them every night at bed time with some astringent ointment, and I know none that answers better than the citron ointment.

Nothing can more conclusively prove the nature of this disease than the appearances which arise during the cure of the third stage. If we watch any case to its termination, we shall clearly see that there is really no thickening of the conjunctiva, but that the increased substance is wholly owing to the formation of new matter on the surface of that membrane, as the whole increase of substance gradually wastes away, till there is only so thin a layer that it almost appears as if the conjunctiva palpebrarum was merely affected with chronic inflammation; and if we persist in our observation, we shall perceive the wasting or absorption continue, till the greater part of the conjunctiva shall put on its natural healthy colour, only a few patches of small distinct, elevated, and pale coloured granulations remaining, which also, gradually diminishing, at length entirely disappear.

The efficacy of the treatment pursued at Christ's Hospital, and which has been described in the preceding pages, is rendered sufficiently evident, without the statement of any cases, by

the fact, that not a single unfortunate case happened among the boys of that institution, though several hundred of them were attacked by the diseases; indeed, not even the slightest shade of opacity remained in more than five or six cases, and in these few cases this effect was more to be attributed to a strumous, or scrophulous ophthalmy, to which they had been long subject, than to this particular disease. The formidable nature of the disease is fully proved by the following circumstance:—It so happened that several of the boys were permitted to go home for the benefit of their general health, before they had got quite rid of the disease, which some of them therefore communicated to their friends, and among the individuals thus affected it came to my knowledge, that several cases of total and permanent loss of sight in one or both eyes occurred. Nothing either could more fully prove the propriety and advantage, if any additional proof were wanting, of the plan of treatment pursued at Christ's Hospital, than the occurrence of these melancholy accidents, in other situations, from precisely the same disease.

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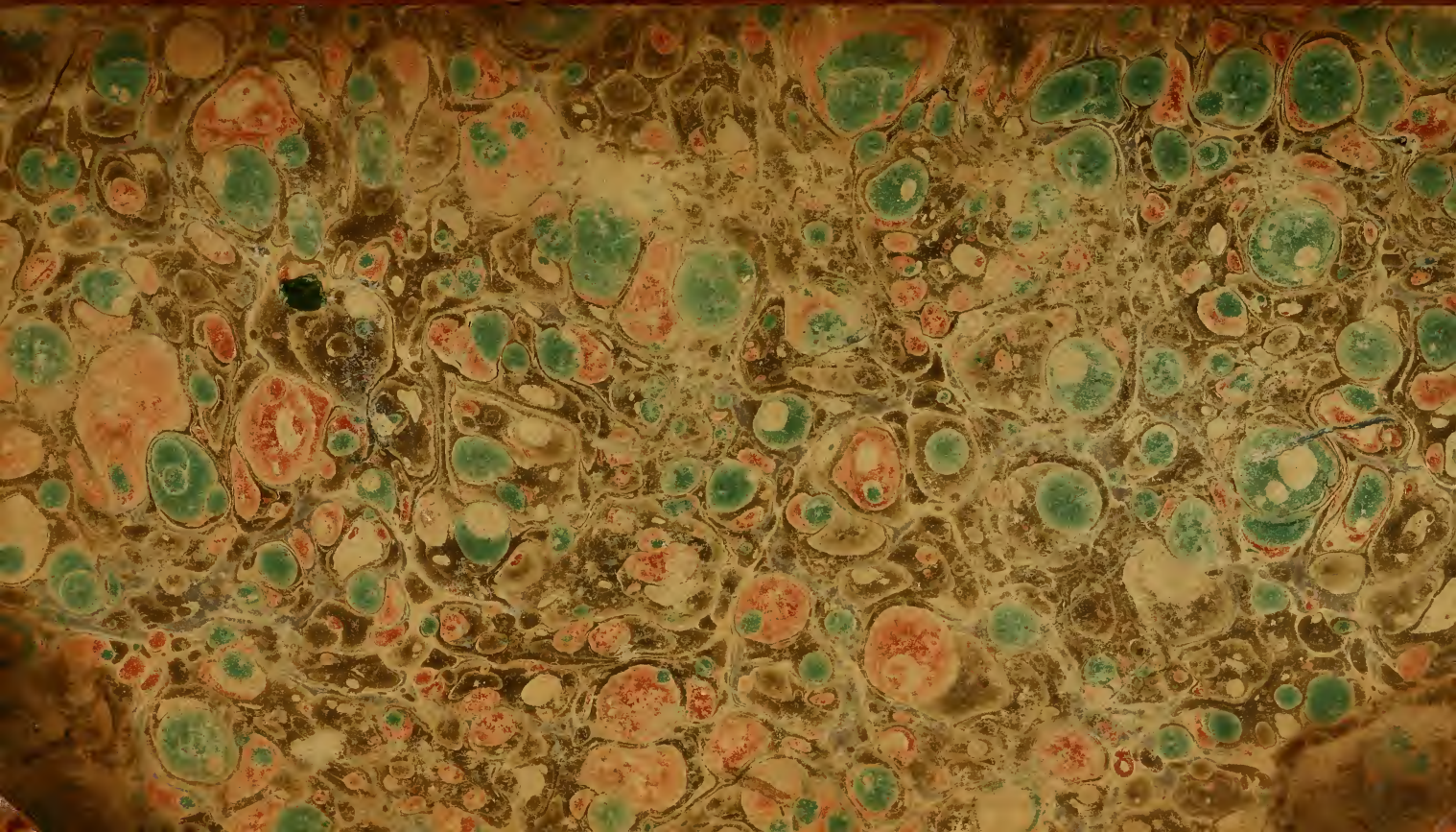
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